SIGNAL PROGRESS AT NEWCASTLE

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MODERN TRANSPORT

"THE TIMES" OF THE TRANSPORT WORLD

CITY TRANSPORT IN BRADFORD

See Page 3

VOL. LXXXI No. 2091 [Registered at the G.P.O. as a newspaper] LONDON, APRIL 25, 1959 PRICE NINEPENCE

CURRENT TOPICS

Be a Better Driver

OPENING a new campaign aimed at improving driving standards at the Guildhall on Monday, Mr. Harold Watkinson, Minister of Transport, announced that later this year an up-to-date version of the Highway Code embodying rules for driving on the new motorways would be laid before Parliament. He said an immense amount of work had gone into it to make it as workable and valuable as possible and that the first concern of everyone should be to understand and practise the Highway Code. In addition a code of 20 points of good driving had been drawn up at the Ministry for issue at intervals during the present campaign. The campaign entitled "Be a Better Driver" will last until the end of September. It has been organised jointly by the Ministry of Transport and the Royal Society for the Prevention of Accidents and is being supported by more than 1,000 local road safety committees. Mr. Watkinson stressed that a major safety effort was more than ever necessary now. Last year accidents cost nearly 6,000 lives and involved injuries to nearly 300,000 people; by the end of this year the total number of vehicles on the road would have increased to about eight million and we had not yet adjusted ourselves to the standards we must try to achieve if our skill in road usage was to match the rate of growth of motor traffic. The success of road safety education among children, through which the child casualty rate in the last 15 years had been halved, proved the task possible. Meanwhile potential progress in another direction has been marked by the announcement of a gift to establish a chair in traffic and highway engineering at Birmingham University.

Inland Waterway Pleasures

EACH year the display of equipment by British Waterways at that part of Paddington which has been dubbed "Little Venice" by the popular press adds to the interest taken in the redevelopment (for transport purposes) of the canals inherited by the British Transport Commission. The exhibition open until today (April 25) emphasises the pleasure craft available for organised parties or for private hirers who seek relaxation afloat. *Water Rambler*, now to begin its third season of Oxford and Birmingham five-day cruises, is well known; but there are several motor narrow boats and wide-canal boats available as day cruisers for up to 60 people and some of them regularly provide trips of two hours or so from such points as Swan and Bottle Bridge, Uxbridge. This year there is to be a regular passenger service between Paddington and the Zoo, with combined admission tickets giving entrance to the Zoological Gardens. Camping cruisers with weatherproof accommodation for up to 18 can be hired and there is a fleet of more refined hire cruisers with up to six berths; they set a new high standard. The good offices of British Waterways are available to users in respect of moorings, yacht basins and other services and a series of 14 booklets of navigational information is in course of production. Perhaps the pièce de résistance is this year's new five-day cruise by *Water Wanderer*, beginning in June, from Boston and Nottingham on alternate Fridays and calling at Woodhall Spa, Lincoln and Newark en route. She accommodates 16 in air-conditioned single and double sleeping cabins, and passengers have the benefit of a large lounge-dining saloon and an attractive sundeck. At the opening of the London exhibition Sir Reginald Kerr, general manager of British Waterways, said that his undertaking was trying to meet all tastes and to make the waterways more pleasant by improving the locks, dredging, and removing the weeds. The glamour of Little Venice has been enhanced this week by floodlighting.

Peak-Hour Rail Problem

PROPOSING the principal toast at the annual dinner of the Association of Supervising Electrical Engineers, Sir Brian Robertson, chairman of the British Transport Commission, said that peak-hour traffic was causing him great concern. "You probably all know," he continued, "that peak-hour traffics, known on the other side of the Atlantic as commuter services, are a great problem for the railways, because of the cost of providing them. Although our trains are full, sometimes to overcrowding, during the peak hours, these same trains are under-used during the remainder of the day. It is this basically which makes these services costly to provide. Now if the service is electrified and on top of everything we have to pay a peak kilowatt-hour price for our current, then we get hit as it were twice." He added that it was made clear in 1955 in the modernisation plan that electrification was to be the dominant feature of traction arrangements in the future. Since then work had been going ahead with all urgency. In the main they were achieving their initial targets. This year would see not only the completion of the first phase of the Southern Region Kent Coast scheme using the third rail system, but also the introduction of the new a.c. system on the Eastern and London Midland Regions.

Speedy Electrification Needed

SEVERAL other suburban electrification schemes would come into operation during the following two years, Sir Brian Robertson went on. From a technical point of view his impression was that things were going along well. "The various electrification projects have been planned to take advantage to the full of the combined capacity of private enterprise and of the railways themselves. We have been given generous co-operation by all parts of the industry, by consulting engineers and by members of your association. And yet, I am not satisfied. The trouble is that time is just not on our side and the rate of progress forecast for the larger electrification schemes is not fast enough. We have already made up our minds that the electrification of the London—Manchester—Liverpool line must be speeded up by several years. It is not an easy thing to do. I have had people say to me: 'Why do you not hand over this job or a part of it to private enterprise and tell them to get on with it.' Now that would be a very good idea if we could stop all the trains running while the firm did the job. Unfortunately that is precisely what we cannot do. Moreover, as you very well know, an electrification project is not just an electrification project. It inevitably involves a great deal of civil engineering and also in most cases a complete reconstruction of the signalling and telecommunications system of the railway." The urgent need for rapid introduction of electric traction on the main trunk routes, as well as on many important routes beyond those visualised in the 1955 plan, was stressed in a leading article in MODERN TRANSPORT of April 4.

Cutting Out Wayside Stations

ANNOUNCEMENT of the closure for passenger train service from April 6 of Holme and Yaxley and Farcet stations marked a further stage in withdrawal of services from little-used stations on the Hitchin—Peterborough section of the Great Northern main line. It illustrated the general trend of concentrating upon providing a passenger train service between the main centres of population. Prior to the withdrawal of passenger train services from the two Eastern Region branch lines serving Ramsey, i.e. Holme to Ramsey North and Somersham to Ramsey East, some years ago, there were 20 stations open for passengers in Huntingdonshire, whereas from April 6 only nine remained. On the Great Northern main line only St. Neots and Huntingdon North remain, as against six stations open for passenger train service prior to September 15 last year. The closing of Holme in fact pinpointed the trend to shut down former interchange stations where the branch service has been withdrawn and originating traffic is negligible. Similar stations in this category south of Newcastle are Essendine, Dukeries Junction, Alne and Pilmoor. In the case of the 236½ miles stretch of the East Coast main line between Hitchin and Newcastle, the only intermediate stations still open for passenger traffic which may be classed as "wayside stations" are Tallington, Essendine, Little Bytham, Corby Glen, Temple Hirst, Tollerton, Croft Spa and Chester-le-Street. Of these eight stations, the first four listed—located between Peterborough and Grantham—will be closed for passenger traffic (together with the Essendine—Stamford branch) if the B.T.C. is successful in its application for closure submitted to the Transport Users' Consultative Committee last February. Croft Spa is served solely by N.E.R. trains between Darlington and the Richmond branch.

Panniers at Folkestone

UNQUESTIONABLY, if the British Railways ubiquitous 350 horsepower standard diesel-electric shunting locomotive has a rival, it is the Western Region standard six-coupled pannier tank. For although, after being in production for nigh on 80 years, the building of this type of engine has now definitely ceased, it would appear from recent events that its sphere of activity is still rapidly expanding. Not only have its services been enlisted by the London Transport Executive, the Scottish Region, and by the Southern Region for its empty stock workings between Clapham Junction and Waterloo, but a further contingent has now appeared at Folkestone Harbour. These widely scattered machines have completely usurped the time-hallowed Stirling 0-6-0 tanks from the duty of working the steeply graded Folkestone Harbour branch. This had been their particular preserve for nearly 70 years. The newcomers are, of course, far more modern and powerful machines than their predecessors, and are rated to handle up to 180 tons per engine on the incline. This means that the heaviest boat trains now require only three engines instead of four. After waiting so long for something to turn up, the enginemen at Folkestone, if a little surprised, are nevertheless well pleased with their new charges. The only thing that worries them now is the fierceness of the Western blast pipe. Not long will pass before Phase II of the Kent electrification scheme brings the multiple-unit boat train on this steep bank.

Combustion Engines Conference

PROVISIONAL arrangements for the 1959 International Combustion Engines Conference, which will be held in Wiesbaden, Germany, from June 14 to 19, have now been published and, in this country, issued by the British Internal Combustion Engine Manufacturers' Association, 6 Grafton Street, London, W.1. The theme of the conference is diesel engines and gas turbines up to 1,500 h.p., covering current problems concerning design, production, development and operation. Among the 40 or so papers which have been accepted are a number dealing with exhaust-gas turbocharging of high-speed diesel engines, including several on the effects of conditioning the charge air, and others on free-piston gasifiers and small gas turbines. Ten of the papers are by British engineers while others are contributed by representatives of nine other countries, including Spain and Japan. A streamlined procedure adopted for the conference, which divides it into two study groups that will be in session simultaneously, will ensure the widest possible coverage of the subjects dealt with. There will be simultaneous translations into the three official languages (English, French and German) and an official recording of the discussions will be available later on. Texts of papers will not be read at the conference but each author will be allowed about 10 minutes in which to present the essential points and to add late information that has come to hand since the paper was written before discussion is opened. During the conference there will be opportunities of visiting leading German factories in the fields covered.

B.P's 50th Anniversary

CELEBRATING the 50th anniversary of its founding as the Anglo-Persian Oil Co., Limited, the British Petroleum Co., Limited, held a dinner in London on April 14 at which the guest speakers were the Chancellor of the Exchequer, Mr. D. Heathcoat Amory, and Lord Birkett. The history of the organisation has not been one of always smooth development, due partly to the fact that its principal centre of production for many years was in what had been largely barren territory until the arrival of the company. By 1951 when circumstances forced suspension of operations the annual tonnage of crude oil being pumped to Abadan and Bandar Mashur was 32 million, which may be compared with the annual capacity of 400,000 tons of the original Abadan refinery when it was opened in 1911. Through its interests in the production companies operating in Kuwait, Iraq and Qatar, as well as in Iran, B.P. obtains most of its crude oil from the Middle East, but a prospecting subsidiary has production or exploration interests in many other parts of the world including Canada, Nigeria, Trinidad and the United Kingdom. Apart, of course, from production there is the matter of refining and here the expansion has been such that annual capacity in Britain alone will total 13½ million tons. Five years ago the new refinery at Aden was brought on stream and in 1955 came another in Western Australia. The demand of the world for oil and its derivatives is insatiable and B.P. does much to help meet it. To mark the golden jubilee a history, *Adventure in Oil: the Story of British Petroleum*, has been written by Henry Longhurst. It is not inappropriate that the foreword should be by Sir Winston Churchill.

LEADING FEATURES IN THIS ISSUE

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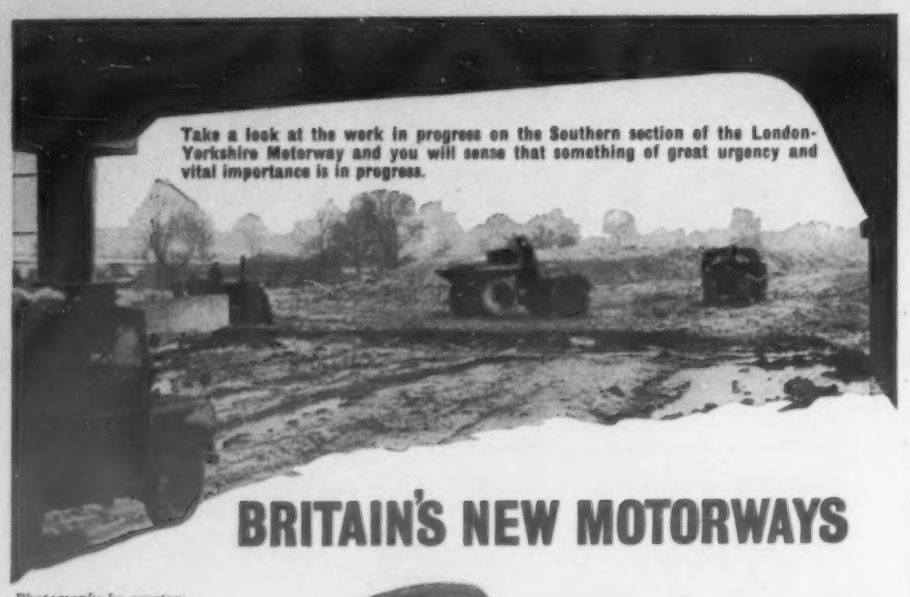
Take a look at the work in progress on the Southern section of the London-Yorkshire Motorway and you will sense that something of great urgency and vital importance is in progress.

BRITAIN'S NEW MOTORWAYS

Photographs by courtesy of John Laing and Son Limited

The pioneering spirit of our forefathers becomes a reality of today as round the clock through the most appalling weather conditions Man and Machine strive for completion of the motorway which will herald a new age of road travel in this country.

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The Editor is prepared to consider contributions offered for publication in MODERN TRANSPORT, but intending contributors should first study the length and style of articles appearing in the paper and satisfy themselves that the topic with which they propose to deal is relevant to editorial requirements.

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Railway Development Abroad

THE paper contributed by Major-General LI. Wansbrough-Jones, secretary-general, British Transport Commission, to the recent proceedings marking the fiftieth anniversary of the Railway Students' Association at the London School of Economics, was noteworthy for its review of railway modernisation in this and other countries. Various considerations have prompted such schemes but each, as the author pointed out, must have been preceded by consideration of the potentialities of the railway system and whether its continuance was really necessary. In no case has a nation decided to do without its railways, although one must admit that the Republic of Ireland came extremely near to doing so when a committee, set up in 1956, recommended amongst other things the closing of more than half the railway mileage, a solution side-stepped by legislation which placed an obligation on the long-suffering C.I.E. to eliminate its losses by 1964. Possible to regard as the first comprehensive modernisation scheme was that decided upon by the Swiss way back in 1918 for the electrification of the Federal Railways, 90 per cent of which had been completed when war broke out in 1939. Then, in 1922, the Italian State Railways initiated a more or less continuous programme of electrification which, pressed forward under the Fascist regime, had by 1938 increased the route mileage converted in that country from around 400 to just over 2,500. In Britain during the inter-war period greatest concentration was on the Southern Railway which, after dealing with the close suburban areas south of the Thames, extended its electrification to Portsmouth, Brighton, Eastbourne and Hastings.

Postwar Modernisation

THE real significance of modernisation, however, has been brought out in the 14 years since the last war, and the most comprehensive of the plans is that of Great Britain—perhaps because of its late arrival. The year 1945 saw the railways of this country run down because of their strenuous wartime efforts. Our railways were not largely destroyed, as were those of many Continental countries, and their rehabilitation was therefore not so markedly urgent. Curiously enough, however, as the author reminds us, the first postwar modernisation scheme to be put in hand was in Switzerland, whose railways, mostly already electrified, had been spared the ravages of war. Anticipating postwar economic problems, the Swiss Government in 1944 initiated a 10-year programme of public works for which more than 750 million francs were allocated to the railways, over 70 per cent of this sum being divided between new locomotives and rolling-stock and the widening of existing lines. This rail element of a great public works scheme was later expanded considerably, over 1,500 million francs being spent between 1946 and 1957 on purely railway works, with gratifying increases in both passenger and freight traffic, the latter being encouraged by a simplified charges system. He regards the reconstruction of the war-ravaged Netherlands Railways as perhaps the most spectacular of the postwar plans. Holland's first programme, costing over £100 million, aimed at reconstruction, including a project to electrify all main lines. There followed a second programme, between 1953 and 1958, in which emphasis was on diesel traction for subsidiary lines. Its principal features were the abolition of steam traction, constriction of the railway system and a material reduction in freight traffic co-incident with widespread co-ordination with road haulage. All this has provided Holland, not only with a compact and efficient railway system, but also with economic public transport generally.

France and Belgium

ALTHOUGH, in France, there has been no comprehensive and systematic plan as in Holland, development has continued year by year with Government authorisation and financial support on the principle of keeping pace with economic and industrial requirements. From 1945 to the end of 1952 the S.N.C.F. spent the equivalent of about £1,000 million on reconstruction and modernisation and a further £230 million in the next five years. Besides extensive electrification, for aspects of which France has become famous, new signalling and train control techniques have been introduced, and as early as 1947 a new freight charges scheme based on loadability was adopted. In Belgium, very shortly after the war, a national committee recommended electrification of 1,500 route-km. of line—roughly one-third of the railway system. Work was started in 1947, and 10 years later some 800 route-km. had been completed. The author states that this electrification project has been the only postwar plan implemented by the Belgian National Railways since the war, accounting for over 50 per cent of the capital expenditure, apart from that incurred on making good wartime damage to bridges, buildings and rolling-stock. There have been satisfactory increases in traffic. In Italy there have been three distinct phases: first, postwar rehabilitation and reconstruction, virtually completed by 1952, followed in 1953 by a five-year plan for the improvement and partial electrification of some lines in the south, and, in 1958, a new modernisation plan involving in the first stage some £150 million. Its aim is to develop investments likely to meet increased traffic requirements and to produce operating economies. In particular it involves further electrification, as well as the purchase of main line and shunting diesel locomotives, electric locomotives and rolling stock. Additional to the economic background of this scheme there is a subsidiary motive to reduce the high incidence of unemployment by State-financed capital works.

Western Germany and Spain

SURPRISINGLY, in terms of money spent on reconstruction and modernisation, the postwar railway plans of Western Germany are greater than our own. No less than £2,200 million was spent between 1945 and 1955, of which just under £1,000 million was devoted to modernisation proper and the remainder evenly divided between war damage reconstruction and renewals. A further £350 million odd has since been expended on new capital works. Germany as a coal producing country, like Great Britain, retained her faith in steam until 1955 and then moved steadily towards electric and diesel traction. Her immediate postwar incentive was, of course, towards reconstruction, but the trend in recent years has been in economic development. Traffic increased steadily from 1950 onwards, every effort being made from the technical point of view to improve the potentialities of the Bundesbahn. There has lately, however, been something of a recession and the system has not been able to avoid deficits, despite the favourable position in which the State railways are placed, thanks to the close licensing control of road services, although the Government is empowered to amend railway freight rates if the Minister considers it expedient in the national interest. Spain was another of the countries reviewed in Major-General Wansbrough-Jones's survey. Here, despite the damage sustained in the Civil War, it was not until 1946 that a modest reconstruction plan was put in hand, replaced in 1949 by a general modernisation plan which, extended in 1952 and 1955, provides for expenditure of some £210 million. Amongst other things this provides for electrifying 670 route miles, colour light signalling and centralised traffic control on selected lines and new locomotives. A further plan, now being evolved, will entail further expenditure estimated at £615 million.

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Forthcoming Events

Until April 30.—Engineering, Marine, Welding and Nuclear Energy Exhibition. At Olympia.

April 27.—Institution of Railway Signal Engineers (Bristol). Paper by Mr. E. J. Harris, "Modern Trends in the Design of Signalling Apparatus." At Bristol Temple Meads Station. 6 p.m.

April 28.—Institute of Transport. Informal luncheon. Speaker, Mr. G. R. H. Nugent, M.P. At Connaught Rooms, Great Queen Street, W.C.2. 12.30 for 1 p.m.

Omnibus Society. Paper by Mr. D. S. Giles, "Shamrock and Rambler" (Travels in Ireland). At Victoria Coach Station, S.W.1. 6.45 p.m.

April 29.—Norbury Transport and Model Railway Club. Paper by Mr. R. Gillam, "British Narrow-Gauge and Light Railways, 1929-59." At St. Stephen's Church Hall, Thornton Heath. 7.30 p.m.

May 1.—Railway Club. Paper by Mr. Charles F. Klapper, "The Golden Age of Light Railways." At Royal Scottish Corporation, Fetter Lane, E.C.4. 7 p.m.

May 2-3.—Railway and Canal Historical Society. Weekend at Peterborough including annual general meeting and dinner and visits to railways and River Nene Navigation.

May 4.—Traders Road Transport Association. Annual dinner. At Grosvenor House.

May 10.—British Helicopter Rally. At Woburn Abbey.

May 12-14.—Public Transport Association. Annual conference. At Folkestone.

May 24-30.—International Union of Public Transport. Congress. In Paris.

June 16-25.—Institute of Transport. Congress. In Copenhagen.

CITY TRANSPORT IN BRADFORD

Important Role of the Trolleybus

CONSOLIDATION OF DEPOT PREMISES

AMONG trolleybus undertakings which continue to be in a lively state of development Bradford City Transport must hold a high place; new extensions are still in progress, one such being that now being poled to serve a housing estate at Thorpe Edge, beyond the existing terminus of the Eccleshill route. This is not an inappropriate circumstance in what is the oldest established trolleybus system in the country. Bradford Corporation Tramways began a circumferential route between Laisterdyke and Dudley Hill, 1.31 mile, with Railless vehicles on June 24, 1911.

Pros and Cons

Electric transport is specially valuable in a city which abounds in long and steep gradients, with only one level road exit, built on the bed of the almost forgotten Bradford Canal, in the direction of Shipley. On most roads out of the city the trolleybus can draw on all the resources of the power station and show a clean pair of heels to other vehicles. The undertaking recognises the place of the motor bus and, indeed, in a recent period the receipts from the two arms of the system were almost exactly equal.

The bus is, however, distinctly more costly to operate in an area where practically every route calls for a good deal of collar work in low gear. It is not, however, practicable to turn all services over to trolleybus operation, and a good example is offered by the motor bus routes from the City Centre out to Odsal, which there divide to go to a large number of thin ends, including Shelf, Woodside, Oakenshaw, Wyke, Bailiff Bridge and the through service to Brighouse and Huddersfield, joint with Hebble Motor Services and Huddersfield Corporation (which operates in conjunction with the B.T.C. in its outer area), with in addition a rather special service twice daily to Norwood Green.

Bus and trolleybus routes of Bradford City Transport

Tramways

The system originated with 4-ft. gauge tramways dating from powers granted in 1880. Constructed by the municipality, these were leased for the most part to the Bradford Tramways and Omnibus Co., Limited, and in respect of one route to the Bradford and Shelf Tramway Co., Limited, horse and steam-hauled cars being operated. The Corporation entered into operation itself with electric trams on July 30, 1898, between Forster Square and Bolton; in August a second route from Victoria Square to Great Horton was in commission and expansion was rapid. Most of the leased lines were taken over under the terms of the Tramways Act of 1870 on February 1, 1902, and having previously been equipped, the system thus converted to electric traction began full operation that day.

Extensions continued until 59 route-miles were worked by some 250 cars by 1926. At Queensbury, a summit 1,135 ft. above sea level was reached, one of the highest tramway routes in the country (Huddersfield achieved 1,245 ft. on its Outlane route). All over the city the provision of a cheap and rapid local transport system revolutionised the way of life and led to a great improvement in economic conditions. The lines taken over by Bradford Corporation included those leased in Shipley and Bingley, the former having been, between Saltaire and Thackley, operated for a short time until 1904 by the Mid-Yorkshire Tramways Company, an ambitious interurban which gained powers for over 20 further miles of line running to Guiseley, Otley and Ilkley, but which it failed to build.

Novel Tramway Features

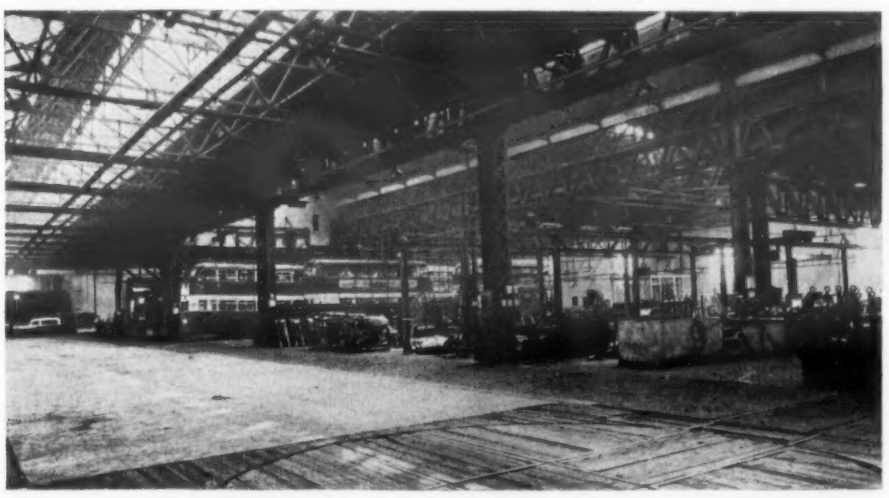
Despite some reserved track extensions and the construction in 1927 of an extremely modern, although unorthodox, eight-wheeled single-deck bogie car with four coupled wheels on each bogie, the tramway system was abandoned from 1928 onwards. The 4-ft. gauge was in itself a limitation, while Halifax had 3 ft. 6 in. gauge, Huddersfield 4 ft. 7¾ in. (involving two changes on the through run between Bradford and Huddersfield) and Leeds 4 ft. 8½ in. Splined axles with movable wheels enabled the 4-ft. gauge cars to transfer to the Leeds tracks at Stanningley, but the through tram service was operated only from 1909 to 1914 owing to difficulties with the gauge-widening apparatus.

Greasy rails on steep gradients provided some troubles of their own, overcome on Church Bank, in the centre of the city, by flushing the rails, as required, on the 1 in 9½ gradient with water from a supply specially laid on to the track at the summit. The last tram route, that to Odsal, was abandoned on May 7, 1950, motor buses taking over as mentioned previously. The Oakenshaw trolleybus route from Odsal, which dates from 1914, was extended to the city in 1927, using the positive tram wire, but the route was converted to motor bus operation in 1940 due to the wide headway in the off-peak period. Altogether 12 of the original tram services were converted to trolleybus operation and another 12 to motor buses.

Present Fleet

Today Bradford, under the management of Mr. Chaceley T. Humpidge, operates 190 trolleybuses and 198 motor buses. The latter are mainly of A.E.C. types, including Regents and two recently acquired 44-seat Reliances with Roe bodies. There is a batch of 45 Leyland PD2 double-deckers with synchromesh gearboxes on the Odsal group of routes, for which they are well suited, and also 25 ex-London RT-type A.E.C. vehicles. There are on order a further 15 A.E.C. Regents for the motor bus fleet. They will be provided with M.C.W. bodies to seat 70.

Besides trolleybuses bought new for Bradford, some of which have been in service for over 20 years and are still in really good condition, although perhaps due for remotoring after covering perhaps 900,000 miles each, the undertaking has taken advantage in building up its present stock of the opportunity of acquiring secondhand vehicles from systems which were disposing of their fleets; in the case of Llanelly the chassis and trolleybooms only were purchased, the vehicles being rebodied at once. Acquisitions include the entire fleet of 32 vehicles from the Notts and Derby Traction undertaking; of these the 10 units dating from 1941 have been rebodied. There are also eight trolleybuses ex-St. Helens and two ex-Brighton which are now being reconditioned to B.C.T. standards.



A general view in Thornbury works. In the foreground is the filled-in traverser and the turntable retained for use by the museum tramcar

Latest Bodywork

Particular interest attaches to the nine units bought from Darlington as single-deckers, now equipped with 28 ft. 11 in. front-entrance bodies with the maximum overhang; provision is made for 71 seats. The body is an East Lancashire composite type and high-tension lighting is employed; high-tension lighting will be used also in future in all-metal bodies for the fleet, now that the new Ministry of Transport regulations allow it. In later units of the batch the front entrance will be retained, as it is proving very popular with the travelling public; the entrance will be widened by 4 in. to give greater ease of entry and exit.

These front-entrance trolleybuses are used mainly on the Thornton group of routes, so that passengers become accustomed to the process of boarding at the front end. An Overton upper-deck emergency exit is provided. Soft ivory glow Formica is used for interior lining panels. Other vehicles have been painted white internally on the wood fillets to give a lighter interior. The next batch of trolleybuses to be rebodied are on wartime Karrier chassis and will have 8-ft. East Lancashire bodies.

(To be continued)

B.R.S. BUY
193
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Big Repeat Order for A.E.C.

Once again the sheer value of the A.E.C. "Mercury" has been proved by an order from British Road Services for a *further* 193 chassis to join their already large "Mercury" fleet.

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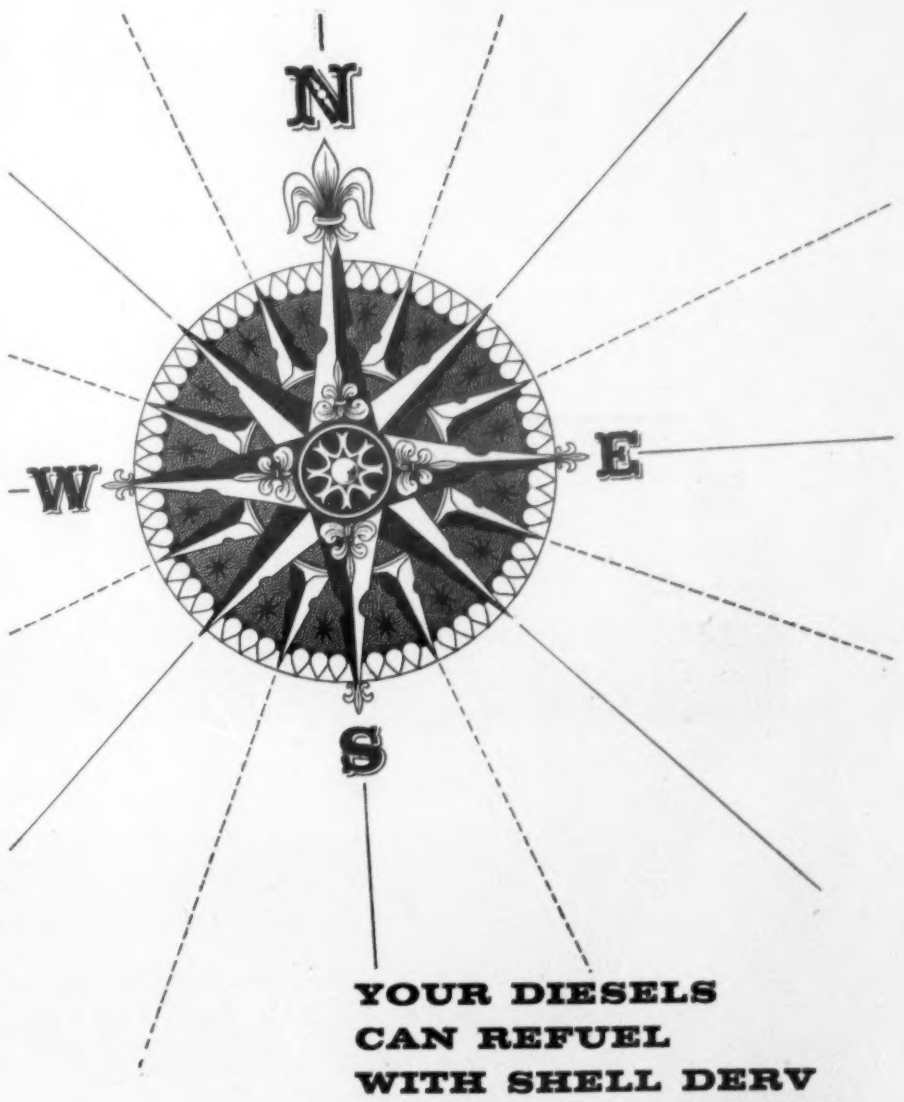

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One-Man Bus Wage Claim

CLAIMS are to be pressed during the coming months with London Transport, provincial agreement bus companies and municipal undertakings for a shorter working week for more than 200,000 operating staff. This was confirmed by Mr. A. Townsend, national secretary of the bus group of the T. and G.W.U., after the meeting of the national passenger service group committee last week. The applications were to be formally submitted last week. It was stated that, in addition, application had been made to the municipalities for a 50 per cent increase in wages for one-man operated buses and that a similar agreement would be sought with the companies. The latter are again being asked to introduce pension and sick pay schemes. The present agreement provides for only a 15 per cent increase in pay on one-man operated buses. Representatives of the union were to meet officials of London Transport on Thursday this week to discuss their application for a similar increase in pay for the one-man services which it is proposed to operate from Kingston in the L.T.E. Central area.

Labour Attitude to Goodwill

THE Labour Party said it wanted to nationalise road haulage in order to integrate the transport system, remarked Mr. R. B. Brittain, chairman of the Eastern area of the Road Haulage Association at Bedford on April 8. By that it meant that it wanted to suppress the competition which free-enterprise road hauliers presented to "those sacred institutions of Socialism, the nationalised British Railways and the nationalised British Road Services," he went on. "The Labour Party's principal exponent of this policy is Mr. Ernest Davies. What a pity it hasn't a policy to integrate Mr. Davies. I see he has been at it again, saying that the Labour Party would not pay for the goodwill of our businesses if his friends ever got the chance to nationalise road haulage again. It would pay only the depreciated value of the vehicles and other assets. Mr. Davies needs a lesson in economics. Goodwill is one of the soundest assets of a business, and it is certainly among the chief assets possessed by free-enterprise road hauliers. They have built up this goodwill by serving the community efficiently and speedily and by helping to keep down the cost of living of the ordinary man and woman, thereby making the housewife's purse stretch farther," said Mr. Brittain.

A 1936 vintage Leyland Titan double-decker of East Kent Road Car Co., Limited, has been shot here and in France for a new film set in 1940; right, the experimental Guy 30 ft. long 68-seater operated by Wolverhampton Corporation. Now 20 more are to follow

Survey of Canadian Transport

ONLY 15 per cent of the total mileage covered by goods vehicles in Canada during 1957 was for hire, but as much as 37 per cent was represented by inter-city hauls made by private (i.e. users') vehicles. Nearly 75 per cent of all commercial vehicles in the dominion had a gross vehicle weight not exceeding five tons. Of all public haulage vehicles, more than one-half (25,884) were registered in the two provinces of Quebec and Ontario. These and other facts are recorded in the first study of Canadian road transport, *Motor Transport Traffic Statistics—National Estimates, 1957*, published by the Dominion Bureau of Statistics.

Revised Glasgow Fare Scale

NEW fares will probably be introduced by Glasgow Corporation Transport Department on May 31; they will reflect the refusal of the Scottish Area Traffic Commissioners to sanction the increase of the 4d. fare for three or four stages on buses to 5d. As a consequence the undertaking will continue to charge 4d. for the same distance on trolleybuses and trams also. Fares will in future be the same on all sections of road services. The Commissioners' decision would mean a loss of revenue of £238,000, but the deficit will be reduced by about £70,000, the amount saved by the reduction in Excise duty on buses. Even so, and taking into account the revenue of £592,000 from the new fares structure, the deficit for the year ended May, 1960, is already estimated at almost £90,000.

Wage Claim by Inspectors Fails

IT was announced on Monday evening that the Industrial Court had found against a claim by 232 Country area bus inspectors of London Transport for a wage increase of £10 per annum. The present basic rate in this section of the undertaking is £580 per annum, rising to £590.

No Smoking in Licence Conditions

RENEWING licences for 118 stage services of the Northern General Transport Co., Limited, and 19 for the Sunderland District Omnibus Co., Limited, the Northern area Traffic Commissioners inserted a condition in the licences that smoking in lower decks of buses should be prohibited. The application for the smoking embargo was put forward by Mr. J. W. Rennie, on behalf of Durham County Council, who said the restriction would help the council's campaign to curtail smoking among young people, in view of the connection between lung cancer and smoking. Mr. J. L. R. Croft, for the companies, said they had an open mind on the subject, and Mr. J. A. T. Hanlon, chairman of the commission, agreeing to the ban, said it would not cause hardship among the travelling public.

Amber Headlights Rejected

A REQUEST made by postal workers that a number of G.P.O. vans throughout the country should be fitted with amber headlights as an experiment aimed at complete conversion to this form of lighting has been turned down by the Post Office. The Post Office quoted a Road Research Laboratory note on the subject which states: "Measurements of seeing distance in yellow and white light showed that a neutral-coloured object was seen almost equally well in light of either colour. Tests involving meetings between two vehicles, in which the opinions of 20 drivers were obtained under realistic driving conditions, showed that just over half of the drivers preferred white light when meeting another vehicle, although more than half thought the oncoming yellow light was less glaring. Almost all drivers preferred their own beam to be white."

L.A. on Section 16 Offences

SPEAKING as guest of honour at the annual luncheon of the London and Home Counties division of the T.R.T.A., at the Criterion Restaurant on April 16, Mr. D. I. R. Muir, Metropolitan Licensing Authority, said he welcomed the opportunity to meet C-licensees, who kept a staff of 40 in full employment in his office. Referring to prosecutions under section 16 of the Road and Rail Traffic Act, 1933, Mr. Muir said he had no doubt that there were many cases where a responsible employer was let down by irresponsible employees and he dealt with those sort of cases "fairly leniently."

In the first two vehicle checks carried out this year more than 50 per cent, and 67 per cent respectively, of the vehicles were defective. Admittedly, he added, vehicles ostensibly lacking were picked out. In one case 77 out of 114 vehicles were served with prohibition notices. He wondered whether the West Midland area maintenance committee scheme could not be extended to the Metropolitan area. Express Dairies (London), Limited, received the plaque for the best-maintained C-licence vehicle in the Slough driving competition and Pease Transport, Limited, for the third year, that offered in the Oxford competition.

Vehicle Replacement and Fares

OBJECTIONS lodged by six local authorities against the decision of the Yorkshire area Traffic Commissioners granting East Yorkshire Motor Services, Limited, increased fares on certain services, have been rejected on appeal to the Minister of Transport. The objectors contended:

(1) that the company had failed to obtain additional income from excursions and tours, express services, etc.;
(2) that the revised return fare differentials did not encourage regular users to support the services;
(3) that the special provisions made by the company for replacing its existing fleet with an improved type of vehicle ought not to be charged against present fare-paying passengers; and
(4) that the expected return on capital was unreasonable.

With regard to the first contention, the Minister agrees with his inspector that it would not be practicable or desirable for East Yorkshire to increase its fares unilaterally. On the second he does not accept the view that reduced return fares necessarily attract more traffic and if additional revenue is needed, concessionary fares must make an appropriate contribution. On the point about vehicle replacement this case is judged to be similar to the appeals in 1954 and 1958 regarding increases in fares in South Wales. Now, as then, it is the Minister's opinion that fares should be so fixed as to enable an operator to make reasonable provision for the replacement or renewal of his assets and that it is primarily the responsibility of the operator concerned to decide what vehicles are required for the satisfactory and efficient maintenance of his services. For this purpose, the actual method of provision in the accounts is unimportant, once it has been accepted that it is necessary to put aside funds to enable the operator to renew his fleet with the vehicles best suited to the interests of the operator and his passengers. In this case the provision made for replacement cannot be regarded as extravagant. As to return on capital, in the present case this can be regarded as reasonable when account is taken of the low return on capital earned over the previous three years.

Bus and Coach Developments

London Transport proposes to withdraw service 852 (Three Bridges—Crawley—Lambs Green—Horsham) after May 12.

Bristol Omnibus Co., Limited, and Wilts and Dorset Motor Services, Limited, propose a Swindon—Salisbury joint service merging their routes which meet at Marlborough.

Buckmaster Garages, Limited, Leighton Buzzard, seeks a Friday night express service from Dunstable to Glasgow. Scottish Omnibuses, Limited, and Western S.M.T. Co., Limited, apply respectively for Dunstable—Edinburgh and Dunstable—Glasgow services.

London Transport country bus routes in the Watford, Luton, Hitchin and Stevenage areas are to be revised on April 29 when the new Stevenage garage comes into use and the old one is relinquished. From the same date Hitchin and Watford High Street garages will be closed. Of routes terminating at the last-named 335 and 336 will be diverted to Leavesden Road and 345 will be extended to Bushey Station. In the Watford area 385A will be extended from North Watford to Garston garage via the Meriden Estate and the 385 group will be withdrawn from Euston Avenue (except two Sunday journeys) and operate via Whippendell Road and, where appropriate, Hagden Lane. As already indicated in MODERN TRANSPORT (April 18) 356 and 376 from Luton to Flamstead and Kensworth are being absorbed in extensions of 364. This also involves a change from double-deck to one-man bus operation. On weekdays the Borehamwood—New Barnet section of 306 will be withdrawn after about 8 p.m., leaving the road to 107. Various routes at Stevenage are being revised.

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IMPROVED SIGNALLING AT NEWCASTLE

Completion of £800,000 Scheme

FURTHER STAGE IN NORTH EASTERN REGION PLAN

A FURTHER stage in the colour light and route relay interlocking signalling system, intended eventually to cover all the main routes of the North Eastern Region of British Railways, was brought into operation at Newcastle Central Station on Sunday, April 12. It may be recalled that the first stage of this scheme was completed by the L.N.E.R. at Thirsk in 1932, and was followed by further installations at Leeds West, Hull, Northallerton, Darlington, York and Huddersfield. The present phase fulfils an objective which was planned some 20 years ago, and had subsequently to be shelved for financial reasons. It replaces a 50-year-old electro-pneumatic installation, which when put in by the former North Eastern Railway, was one of the earliest and most notable examples of power signalling in existence.

Although the present new installation at Newcastle cannot claim with that at York, to be the largest of its kind in the world, it is probably the most complex; including as it does at the eastern end of the Central Station, the intersection of the lines from Gateshead and Tynemouth and the North.

Efficiency with Economy

The main feature of the new arrangement is that the 10 miles of track involved, extending to and including Manors Station, the High Level and King Edward Bridges, and westwards as far as Forth Goods Yard, is all controlled by one signalbox housed above and between Nos. 9 and 10 platforms on the Central Station. This box contains 641 route switches, and it replaces four separate boxes which operated 538 levers and 34 switches. The advantages of concentrating the work in this manner are manifold. Not only is it more economical, but by co-ordinating the work at a single control point the operation of trains can be regulated with far greater efficiency, and the capacity of the layout to handle traffic is thereby increased. This latter point is of the greatest value where traffic over a restricted layout is apt to be particularly heavy at peak periods. This is certainly the case at Newcastle, where during the busiest period 51 trains leave the Central Station within 60 minutes, and where on Saturdays in summer in the area controlled by the new box, 340 electric suburban trains, 420 steam and diesel passenger trains, and 80 freight trains are handled, as well as the numerous empty stock workings and light engine movements which inevitably occur.

Staff Saving

Altogether the changeover will displace about 40 men who have to be found other jobs in the Newcastle area. Eventually it is thought that this problem will take care of itself by the natural wastage which occurs through men retiring, or leaving for various reasons, and by training less men than hitherto. The actual saving of staff in this instance is in the ratio of 23 to 61 for working three shifts and including reliefs. The normal requirement for one shift is four signalmen, one traffic regulator and a telephone man.

Within the area controlled there are 131 sets of points including 13 switch diamond crossings, and the signalling comprises 94 of the searchlight type, including 61 with theatre type route indicators.

For shunting movements there are 170 subsidiary signals, 84 of which embody calling on indicators and work in conjunction with the colour light signals. The whole 10 miles of track is divided up into 260 track circuits which when occupied by a train automatically control the relevant points and signals.

Control Room

The control room is a centrally heated, air conditioned, and carefully illuminated semi-circular room which houses a switch console facing towards a 53-ft. long panel carrying a diagrammatic plan of the track controlled. Both the console and the diagram are arranged in four sections, each operated by one signalman. Each section is set at an angle so that each signalman and the traffic regulator, who is mounted on a dais in the centre, have an unrestricted view of the entire diagram. The train describer display indicators are mounted above the track diagram panel, and these give a description of all trains or engines excepting those within the platform area, the description being related to the signal towards which the train is moving. Track circuits are indicated on the diagram by distinctive colours, and there are 2,840 route lights inset, which display all the requisite information in the usual manner.

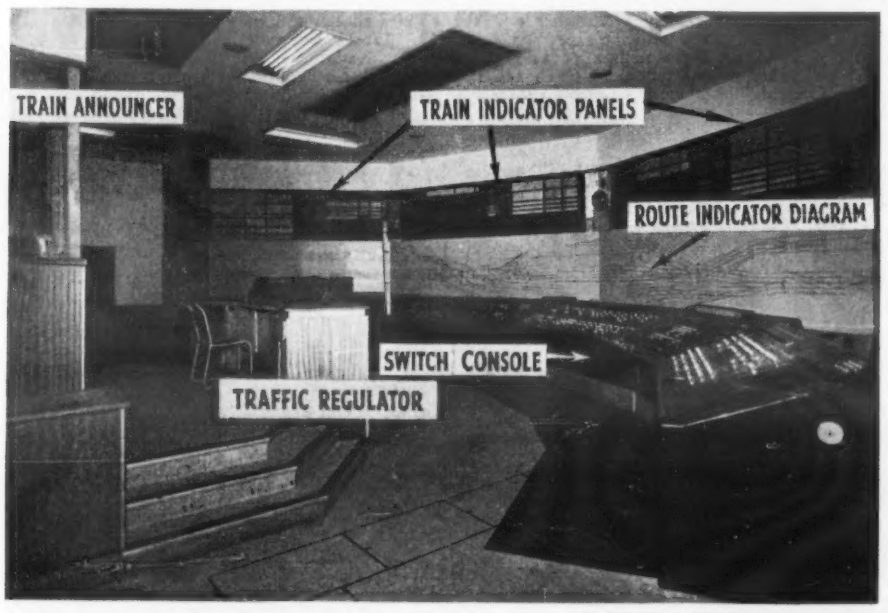
Provision is, of course, made for manual operation of the train describer in the event of any part of the controlling signalling apparatus being out of order. To cope with light engine movements between Heaton motive power depot and Manors Station bay platforms there is a special arrangement so that the descriptions for these engines, on clearing the appropriate signals, are transferred from the Newcastle receiver display to the transmitter display and transmitted automatically to the forward signalbox.

Behind the traffic regulator there is a glass-panelled soundproof room for the station announcer using the public address system. From this vantage point she has a clear view of the signalling and train description diagrams, and to the rear, of the main north and south platforms, and is thus able to give the travelling public a great deal of supplementary information based on prior observation and direct contact with control.

Relay Room

The relay room, 85 ft. long by 56 ft. wide and 18 ft. high adjoins the control room and occupies two floors. It accommodates all the interlocking relays together with track, point indication and signal control relays, and the complexity of these circuits is illustrated by the fact that there are 850 lock relays, and 2,000 others for control, indication, and release purposes. The wiring between these relays has taken about 400 miles of single core flame-proof cable, with multi-core cable for external connections and to the console and diagram panel. Altogether there are 85 multi-core cables terminated on fused links which protect the equipment from fault currents and surges occurring on the electrified lines.

Power is fed in from two independent public supplies at 660 volt single phase, and connected to bus bars through oil filled circuit breakers. All the switchgear is mounted on the power supply panel with flush-mounted instruments, and automatic carbon dioxide fire protection apparatus is provided in the power cubicle.



A view of the new control room in the signalbox at Newcastle Central when almost completed

Telecommunications

The traffic regulator can, by means of a large telephone keyboard, communicate with station and sidings staff at numerous points in the vicinity of Newcastle and signalmen as far afield as Durham, Blaydon, Tynemouth, Killingworth, etc., and with the controllers at Newcastle and Sunderland traffic controls who are engaged in arranging traffic movement over the whole of the Newcastle district.

Automatic ringing out and selective calling-in facilities on each circuit, ease the burden of the signalmen and traffic regulator. The signalmen and traffic regulator in the new box can make immediate contact with the signalmen in the adjacent signalboxes at King Edward Bridge, Forth, Manors North, Argyle Street, Heaton and Greensfield, by means of separate direct type telephone circuits. A total of 47 direct telephone circuits links the signalmen with specific signals throughout the signalling area which enable engine crews to converse with the signalmen.

To help to alleviate any delays during difficult weather conditions, 29 emergency point zone telephones have been fixed at specific important point switching centres. The plug points connect with the telephone panels in the signalbox thus enabling the signalmen and the permanent way staff to converse with each other whilst testing the movement of the points during the snow clearing operation. A special telephone keyboard has been incorporated in the signal relay room, situated at the rear of the signalbox control room to enable wide coverage of communication to be established with the signal and telecommunications maintenance staff over the whole of the signalling area. This is achieved by fitting plug-in telephone sockets in all the cable termination housings which are situated along the lineside, linking these to the keyboard through various circuits.

Calling Maintenance Staff

The maintenance staff is equipped with portable plug-in telephones, the insertion of which causes an alarm and flashing light to appear on the keyboard in the relay room. This brings on to the circuit the staff which is maintaining the plant at the signalbox. To enable the latter to call up the outside maintenance staff, a series of loudspeakers has been arranged in zones situated alongside the track. A distinctive interrupted high frequency note can be transmitted through these speakers by depressing a key in the relay room.

At the important East and West Junctions are talk-back loudspeakers through which the signal relay room maintenance staff can converse with their colleagues who are maintaining the point motor and detection mechanisms and track circuit

(*Continued on page* 6)

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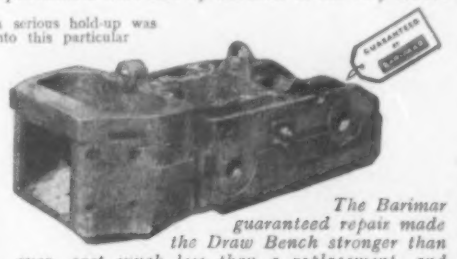

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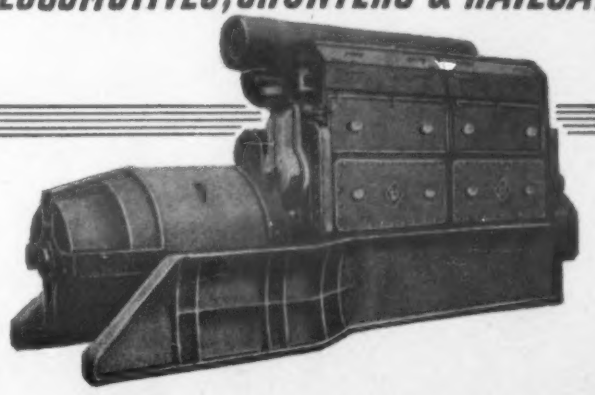

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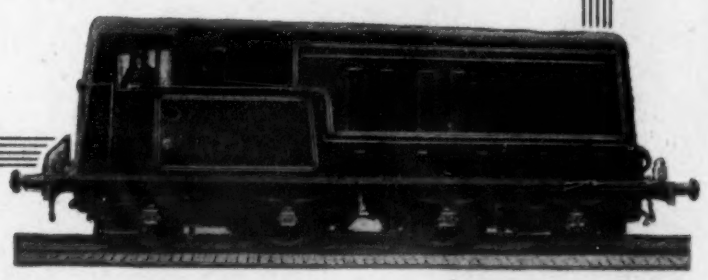

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Improved Signalling at Newcastle

(*Continued from page 5*)

functions. This system can be extended to the signalbox control room in times of emergency for use by the traffic regulator.

Apparatus Room

Within the telecommunications apparatus room the power panels bearing numerous voltmeters, ammeters and switching mechanisms enable the maintenance staff to keep a close check on the overall performance of the system. In the centre is the main distribution frame on to which is terminated all the telecommunication cables entering and leaving Newcastle Central Station. These cables serve all the telephones on the signalling system, the Newcastle railway telephone exchange and long-distance trunk circuits between London and Scotland. At this point the maintenance staff has complete control of all telephone cabling systems in the Newcastle area enabling alterations in routeing and testing of faults to be carried out at a minute's notice. A special fusing and cable termination system has been incorporated on the frame to protect staff and equipment from fault currents and surges occurring on the Newcastle electric traction system.

Situated near the cable frame is a rack bearing rows of small electric clocks. This is the master clock system which is accurately controlled from a temperature regulated pendulum timepiece mounted on the wall of the apparatus room. The small clocks are known as slave clocks being controlled from the master clock on the wall. Each slave clock monitors a system of clocks and indicates the exact timing of that circuit. The administrative offices, Newcastle signalbox and adjacent signalboxes, etc., are all controlled from this source, thus enabling synchronism and exact time to be maintained throughout this area. It is estimated that there are approximately 100,000 exposed contacts in this room all of which must be maintained in a clean state if the various telecommunications facilities are to operate in an efficient manner and to assist in attaining this condition humidity controlled clean air is injected into the room and the used air extracted.

Signals and Route Indicators

The main signals are of the searchlight type, some four and some three aspect. The three-aspect signals are confined entirely to those leading out of bay platforms. The two-position-light type subsidiary signals display a white and red light in the horizontal position for "stop" and the "proceed" aspect is indicated by two white lights inclined at 45 deg. Two different lamps are used in the signals, a 25-watt one being used for the white lights and a 40-watt for the red. This increase in wattage for the red lamp is a practice designed to overcome the loss of illumination through the red lens.

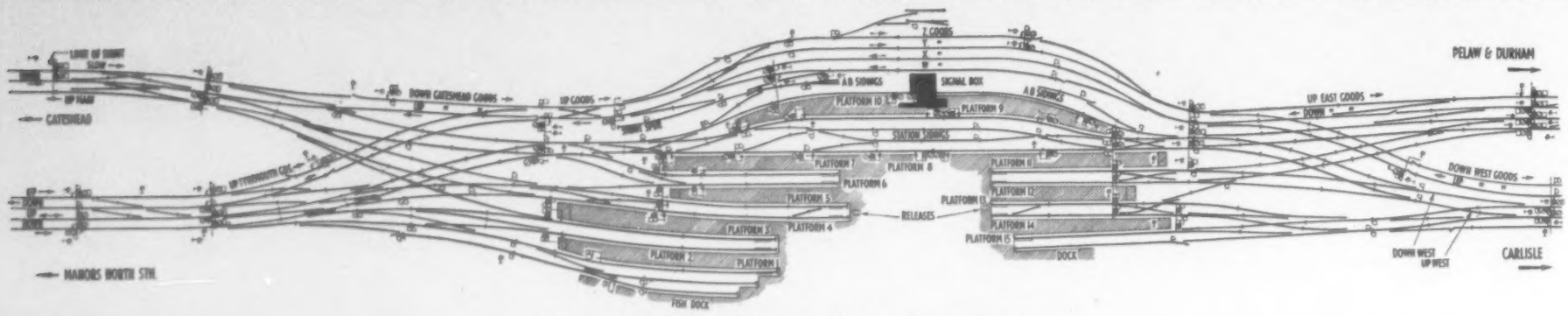
The subsidiary signals associated with the main signals are different from the ones just described inasmuch as they have a "C" (calling-on) sign in place of the red light. Normally no light is displayed by these signals. The "proceed" aspect is indicated by two white lights inclined at 45 deg. and the "calling-on" indication is given by two white lights at 45 deg. as well as the illuminated "C." Because of the speed restrictions in the area controlled, the route indicators used are of the theatre-type. They display the same indication at the front and back, the only difference being that the front indication is yellow and the back indication is lunar white. The rear indication is largely for the benefit of any staff working on the track. These indicators have 49 lamps, front and rear, and are capable of displaying up to 19 different indications.

Planning and Progress

The preparatory and initial work in preparing the scheme was started by the late Mr. C. Carslake when signal and telegraph engineer of the North Eastern Area of the L.N.E.R. It was continued by Mr. J. H. Fraser, when signal and telecommunications engineer of the North Eastern Region, British Railways, and it has been completed and brought to fruition under the direction of Mr. A. F. Wigram, signal engineer, North Eastern Region. The internal work (wiring, erecting relay racks, etc.) has all been carried out by Westinghouse Brake and Signal Co., Limited, with the exception of the telephone and train description apparatus which has been installed by Standard Telephones and Cables, Limited.

Outside work relating to signals, points, track circuits, cabling and cable housings (steel) was carried out by the signal engineer's staff who also provided the temporary circuits in the existing signalboxes to control the new signalling prior to the opening date. In the first stage the semaphore signals controlled from the four displaced signalboxes were changed over to colour light signals, and the control lines for signals, points and track circuits were put into the new cable termination housings. Temporary 50-core cables were used to "tee" into the displaced signalboxes from the new housings until the new installation came into full operation.

The structural design of the control and relay rooms presented interesting problems particularly in the erection sequence in the first stages of which the new framework had to be built around and finally to support the existing arched station roof. The civil engineering and construction work was designed and carried out under the direction of Mr. A. Dean, chief civil engineer, North Eastern Region.



Layout of Newcastle Central Station in relation to the new signalbox

JETS AND AIR TRANSPORT

Some Possibilities

IN a speech at the opening session of the recent World Congress of Flight at Las Vegas, Nevada, the director-general of the International Air Transport Association, Sir William Hildred, declared that international air travel had become, on the threshold of the jet age, the handmaiden of the whole community at every level, both national and international. The jets would do more than merely intensify these developments. They would be on average 40 per cent faster than the old piston-engine types but they would have a far greater productive capacity. Not only would they be larger, but they would turn round quicker; and as a workhorse the jet, given a chance, would be an amazingly productive unit of transport.

Temporary Surcharges

They knew its operating cost would be greater per aircraft-mile but they hoped that it would prove cheaper per seat-mile (so long as something was sitting on the seat) and cheaper per cargo ton-mile (so long as there was cargo in the hold). At present they were not quite sure, but this summer would show. That was why the recent traffic conferences came out in favour of a small and highly temporary jet surcharge.

The old difficulties of customs, currencies, passport and immigration regulations, visas and health checks had, he must say, largely loosened up after a decade of international flight and in this respect he could only feel that the jets would be an even more powerful solvent. Their speed of arrival made a mock of many outworn prejudices and fears and the numbers they carried made a mess of any customs shed where there was a too conservative bureaucrat in charge. Isolation as a government policy had gone forever.

Increasing Urge to Travel

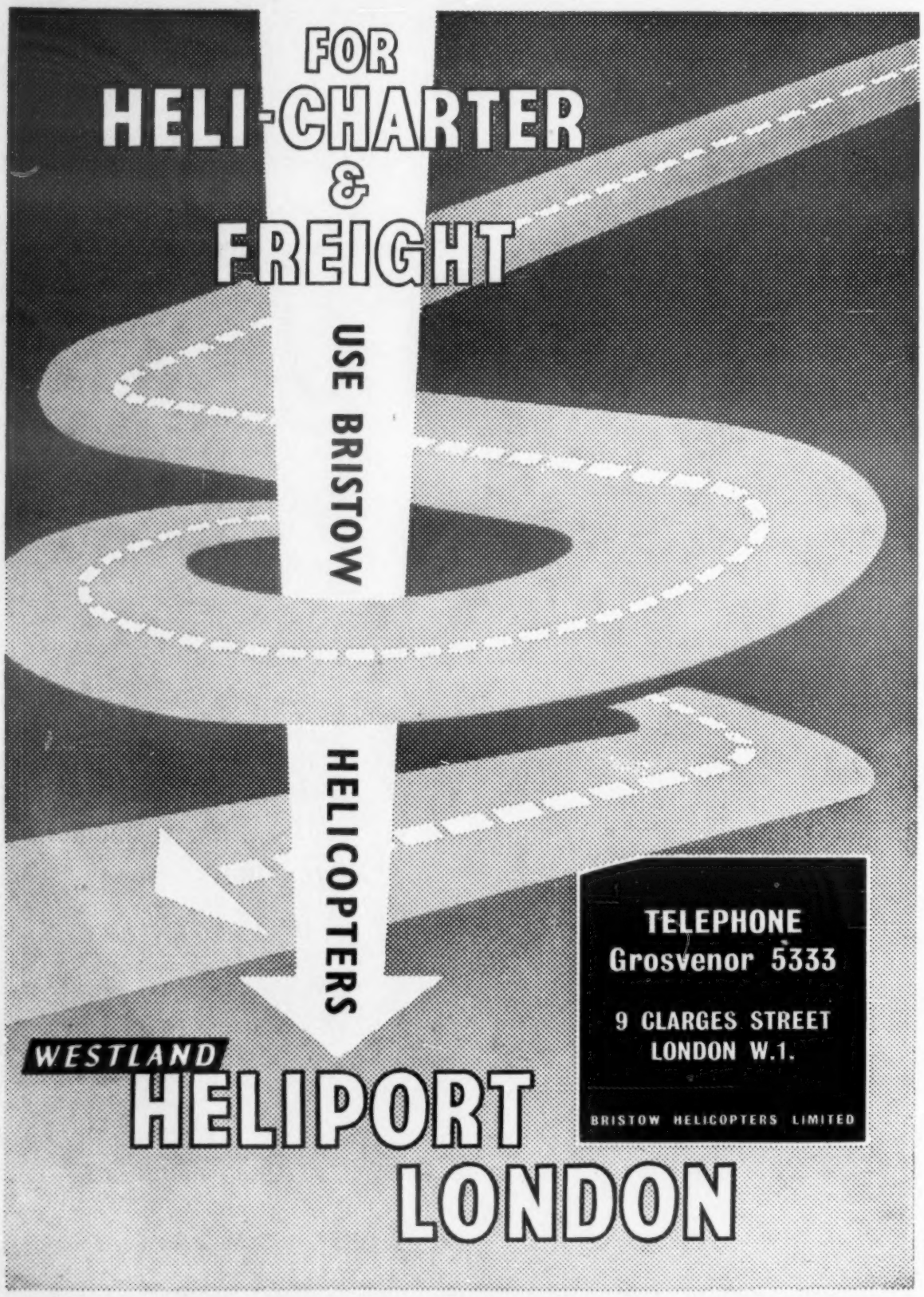
It was not only in the matter of political frontiers that the jet could make its mark. It would give a further impulse to a wave of tourism which started seven years ago, when the tourist fare was first introduced in the tariffs of the airlines. The jet would demand bigger markets and the one most susceptible to increase was tourism for the economy-class passenger. There were several reasons for being hopeful about this. We lived in a world which showed a rising standard of living. People here and in Western Europe had more money, more holidays, more mobility and an increasing urge to travel. Americans were not the only tourists, though they represented the greatest number.

The receiving countries and their governments were recognising the importance of tourism. So were their hoteliers, resort firms, tour operators and others; and though they might, Sir William thought, go a little faster, they would be ready for the increased flow of tourist travel which the jets would assuredly bring. The enormous pulling power of modern advertising must not be forgotten. Tourism was in competition with hundreds of other ways of spending disposable consumer dollars. Travel was only one attraction. It competed with television sets, with new cars, with washing machines, with swimming pools and if they, the airlines, and the others concerned, did not make international travel sufficiently attractive and sufficiently known about, the dollars would stay at home and be spent on other things.

Low Rates Important

It might well be said that the most important attraction was a low fare. That was the way to penetrate a mass market. He agreed and that was another reason why the jets gave him hope. For ten years the airlines had managed to make their fare reductions through tourist fares, family fares, and special package tours, because each generation of piston-engined equipment had been more efficient than its immediate predecessor, producing a little more capacity at slightly lower cost. That period had come to an end and we all recognised it. Jets and turbine power promised a lower cost per seat-mile and they must and would develop the maximum amount of traffic to fill them.

They were not quite sure of the operating costs of the jets as yet. They were facing demands for further wage increases; some governments were putting up their landing charges and navigational aids became daily more complex and more expensive. In fact, they were at present "running like hell in order to stand still." But they must get passenger fares down and offer still more attractive figures to stimulate still further the tourist market. The same applied to cargo in the new world of the jets.



DISTRIBUTION TO THE SMALL GROCER

Wholesaler Alliances Bring Prices Down

REPERCUSSIONS ON A TRANSPORT SYSTEM

ALL over Britain the local grocers' shops are sprouting stickers in their windows which tell of "3,000 cut price lines," "this week's special buy" and similar blandishments; quite a few are beginning to rival the multiple grocers and the glossy supermarkets in the quality of their equipment and in the presentation of their merchandise. In personal service, of course, they would claim to hold all the cards. This, in fact, is a war of showcards and slogans fought over the custom of the housewife. But the window bills are merely the outward signs of a silent revolution which has been taking shape within the grocery trade during the last three or four years, spurred on by the formation of wholesaler-retailer alliances, the small man's answer to the competing multiples in the main roads.

Fruits of Alliance

Members of such an alliance, which is usually formed by one or a group of wholesalers, enjoy first and foremost the benefits of bulk purchasing by the wholesaler, notably of market lines, i.e. produce (mostly imported) for which there are no recognised prices. The alliance organises joint advertising schemes, in newspapers and now on television also, and it provides the independent grocer with an easy means of acquiring the latest in shop fittings and equipment. Other benefits are commonly provided.

A recent survey of this field in *The Times* suggested that by 1965 about 90 per cent of all independent grocers would be participating in such schemes and it was forecast that by the same date about one-quarter of all wholesalers would have fallen by the wayside under the stress of competition. This, therefore, is a time of crisis for the small wholesaler also. Wholesaler-retailer voluntary co-operation, as we have seen, is founded on the ability of the efficient wholesaler, operating on a substantial scale, to buy in very large quantities at extremely keen prices and to pass the rewards on to the retailer, thereby giving him the same initial advantages as are possessed by the multiples.

That is the theory of the thing—in practice the grocer uses his wider profit margin to adjust his prices to those of his competitors. As his part of the bargain he is prepared to order a larger proportion of his requirements through the wholesaler, and in larger quantities at one time, and it is here that a saving in distributive costs is possible.

There is now quite a number of these alliances in being in various areas of the country. The Wavy Line Grocers' Association claims to be the largest, with some 1,400 members among the independent grocers of London and the Home Counties. Sponsored by Kinloch (Provision Merchants), Limited, of South Tottenham, N.15, it is also one of the youngest, having been inaugurated only in September last year, since when it has outstripped all its rivals.

Origin of Title

The "Wavy Line" of its title is derived from a detail of the livery on motor vehicles; this has always been the popular identification of the company with its customers. With window bills and other publicity similarly decorated, it is now fast becoming a consumers' symbol. It is expected that membership will reach the 2,000 mark by the end of this year. The company attributes its success in this field to the organisation and drive which have gone into the development and to the happy, but essentially voluntary, relationship between the two parties.

Under the Kinloch plan there is no compulsion upon the grocer, nor is he committed in any way (as with certain other schemes); he is free to buy outside the alliance if he chooses. Nevertheless, it is estimated that the company can supply as much as 80 per cent of the grocer's requirements from the 3,000 lines offered. Certain manufacturers who formerly effected deliveries to shops now bulk their products to Kinloch warehouses, whence they are distributed in the ordinary way.

The Association commenced operations with a pilot scheme in the Bedford area last year, but Kinloch as a company was early in the field of retailer assistance, having initiated as early as 1952 its bonus incentive scheme, whereby the grocer receives a cheque or credit representing a percentage of the aggregate value of the goods he has ordered during the previous six months. Since that date other services have been progressively introduced: insurance cover (including delivery vans); market information every Friday, prepared from authentic trade sources; purchase of shop fittings and equipment (essential in conversion to self-service trading), in which special price advantages are passed on; printing of bills and counter leaflets.

Latest additions to the Kinloch fleet are Bedford-Scammell TJ series diesel 8-tonners. All semi-trailers have an insulated bacon box at the forward end

Running the Plan

The plan is administered by a retailer advisory committee, wherein members meet directors of the company at monthly intervals to discuss problems arising. Local retailer committees direct the operations of the Association at that level, scrutinise and dispose of new applications for membership. It is estimated that in six months of trading as an alliance members generally have raised their turnover by something like 15 per cent, compared with perhaps 5 per cent for those outside any scheme. Even in such highly concentrated communities as Slough, the numerous Wavy Line grocers, most of them located in secondary shopping areas, have more than held their own against the impact of seven multiple stores on top-class locations.

Distribution Fleet

Four depots, strategically sited around the metropolis, serve the Kinloch delivery area. This is bounded by Bedford in the north, Crawley in the south, Oxford to the west and Southend to the east. The depots are at South Tottenham, Burgh Heath (Surrey), Seer Green (Bucks) and Harold Hill (Essex) and the numbers of vehicles attached to them are 16, 18, 24 and 19 respectively, making a total of 77 in the delivery fleet, i.e. excluding certain vehicles employed primarily for sales purposes. This is an all-Bedford fleet with a high average carrying capacity and built basically around articulation. Of the total strength, 72 vehicles are articulated Bedford 8- or 10-tonners with the Scammell coupling, the balance being Bedford 5-ton vans. There are two semi-trailers to each tractor.

Seer Green was the first depot to go over to diesel-powered units. The Bedford diesel engines there average 13-13½ m.p.g., hauling up to 10 tons, compared with 6.8 m.p.g. from 6-8 ton petrol-engined units. Average weekly mileage of vehicles located at the three outlying depots is 350-400. It is hoped to introduce diesels at Burgh Heath this year and thereafter progressively throughout the fleet.

All the more recent semi-trailers are 20-ft. units,

(*Continued on page* 11)

Returning tractor backs on to semi-trailer which has been loaded during the day. As an overnight security measure at Seer Green depot (the scene of this illustration) it will not be coupled up until the following morning

REVOLUTION IN COACHBUILDING

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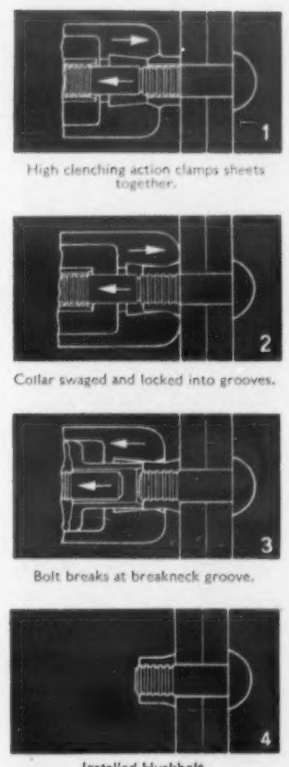

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NEWS FROM ALL QUARTERS

Stations Closing

The London Midland Region announces that Bell Busk Station, between Lancaster and Skipton, and Ampthill Station, between Luton and Bedford, will be closed on and from May 4.

Attraction of Diesel Trains

Diesel trains on the London Midland Region in a recent month carried 1,202,000 passengers, an increase of 234,000 on the total for the respective services in the corresponding month of 1958.

Lea Valley Road Diversion

Lea Valley Road, which connects Ponders End with Chingford across the Lea Marshes, is to be diverted for a distance of nearly three-quarters of a mile on to the eastern end of Nags Head Road (instead of South Street as at present). The new road will have dual 24-ft. carriageways, and will be constructed on an embankment. It will cross the River Lee Navigation, the River Lee and the Eastern Region railway line on bridges, thus avoiding three railway level crossings at Ponders End.

Leicester Central Ring Road

A further two sections of the Leicester central ring road are to be undertaken this summer. A single carriageway 30 ft. wide was completed in 1958 between Church Gate and Great Central Street, joining the short length of dual carriageway constructed by 1939 between Church Gate and Abbey Street. The present scheme provides for the construction of a second carriageway between Church Gate and Great Central Street and for a length of new dual carriageway between Abbey Street and Belgrave Gate.

Canadian Piggyback Services

A trailer-on-flatcar service is now being provided by the Canadian National Railways and Canadian Pacific Railway between Quebec and Montreal, offering late evening collection combined with early morning delivery before the start of the business day at destinations. Piggyback service for licensed road carriers is now available on both railways throughout Canada from the Atlantic provinces to the Pacific coast. Recently the railways announced that the service had been expanded to include the movement of household furniture.

Driver-to-Guard Telephones on B.R.

British Railways is to provide telephonic communication between the guard's and driver's compartments of electric and diesel multiple-unit trains to enable train crews to pass messages and carry out test procedures in clear speech. Telephones are already fitted to some multiple-unit electric trains, and other diesel and electric units have bell or buzzer communications. The telephones will help drivers and guards to carry out brake tests before beginning their journeys, and in their carrying out of the various rules, particularly on services where drivers or motormen are unaccompanied by a second man. Telephonic communication between the two ends of a train would also be an advantage in the event of an emergency.

Hearing of N.U.R. Wage Claim

It is understood that preliminary discussions on the wage claim put forward by the N.U.R. will be heard at a meeting of the Railway Staff National Council on May 6. The other two railway unions are not parties to this claim.

Dartford–Purfleet Tunnel Progress

During last weekend miners working in the two halves of the main bore of the Dartford—Purfleet Tunnel met beneath the Thames. The length of the under-river section of this tunnel is more than half a mile. The tunnel is due for completion in 1962.

Map Shows Road Widths

A new Dunlop road map showing the approximate width of roads in south-east England is now on sale at book stalls and book shops. It is published by Geographia, Limited, price 5s. Ministry of Transport class one and two roads are graded as wide, average, or narrow according to approximate widths. The scale is five miles to the inch, and the area covered is bounded by the south and east coasts, and a line through Bournemouth, Bath, Gloucester, Worcester, Birmingham, Coventry and Kettering to the west and north. New and proposed by-passes and motorways are shown.

Second Look at Paris Parking System

A small party of experts, including Mr. Alex Samuels, chairman of the London and Home Counties Traffic Advisory Committee, visited Paris last week to again study the progress of the scheme for controlling parking by means of the disc system operating in the "Zone Bleue." A similar visit was made in January, 1958, whereafter it was reported that the disc system had disadvantages compared with meter parking schemes. The purpose of the forthcoming visit, it is stated, was to obtain an up-to-date appreciation of the disc scheme so that the Minister of Transport may be kept fully informed of any developments in the system over the last 15 months. (A statement on the outcome of the visit appears in Parliamentary news on page 9).

Maidenhead and Slough By-Pass

Work will start next month on the construction of the Maidenhead by-pass, estimated to cost more than £2½ million. Later it will be extended to by-pass Slough and form part of a 24-mile motorway from Chiswick to a point west of Maidenhead, i.e. the first instalment of the South Wales motorway. The first step will be the resumption of work on a bridge over the Thames at Bray, and on road works in Berkshire, both of which started before 1939. This first section of the Maidenhead by-pass, leaving the Bath Road, A4, near Huntercombe Manor and rejoining it at Maidenhead Thicket, is expected to be finished by the end of 1960. With the Slough by-pass added, the motorway will rejoin A4 near Langley, from where another section has been proposed as far as Chiswick, with a spur to London Airport (MODERN TRANSPORT, July 19, 1958).

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COMMERCIAL AVIATION

More U.S. Jet Services

ROADAIR ACCELERATION

MORE jet services were due for introduction by Trans World Airlines on April 23 in the shape of a daily nonstop service between New York and Los Angeles. The scheduled flight time from New York to Los Angeles is 5 hr. 30 min. and in the reverse direction travelling time is reduced even further to 4 hr. 30 min. A second daily Boeing 707 service is to be added within a short period. Other new jet flights foreshadowed include additional daily return services between New York and San Francisco, new flights from both Washington, D.C., and Baltimore to both Los Angeles and San Francisco, and the inauguration of the first jet passenger flights between Los Angeles and San Francisco.

American Operates More Jet Flights

American Airlines increased its daily jet service between New York and Los Angeles to three nonstop 707 flights in each direction on April 1 in order to meet the demand on that route. The new flights leave New York and Los Angeles respectively at 11.45 and 15.00 local time.

B.O.A.C. and Morton Interline Agreement

The British Overseas Airways Corporation and Morton Air Services, Limited, have concluded an interline agreement taking effect on April 24 for the linking of Morton flights between Rotterdam and London with B.O.A.C. services. Ground transport is provided between Croydon and London Airports.

Flying Tiger Expands Facilities

Intra-area air freight service on the Flying Tiger Line now permits shippers to use cargo aircraft between all terminals of the airline. The new service results from removal of a restriction by the Civil Aeronautics Board which had limited the carrier to flying freight only between designated areas on its transcontinental freight system. Under the new ruling the carrier may now accept shipments between points within areas, so that freight may be flown, for example, between such points as Los Angeles and San Francisco, Chicago and Cleveland, and New York and Boston.

London Helicopter Taxi Service

A helicopter taxi service for passengers and freight starts operating from the Westland Heliport in London on April 24, the day after its official opening. It is to be operated by Bristow Helicopters, Limited. The service—which is claimed to be the first of its kind in Europe—will enable business executives, tourists, Press photographers, doctors and others in a hurry to phone the heliport and book the helicopter to take them wherever they wish to go. Initially the service, which will be flown with Westland Widgeons, will be confined to the hours of daylight, but night flights will be operated at a later date.

Silver City Accelerates Belgian Roadair

Cheaper rates and faster deliveries are features of the revised Roadair freight service between Britain and Belgium, which has been announced by Silver City Airways. All Belgian Roadair rates have been cut by 40 per cent, and the throughout service has been speeded up to reduce the journey time from five days to three. This has been achieved by changing the air link from Lydd (Ferryfield)—Ostend to Ferryfield—Le Touquet. The main trunk route is from London to Courtrai and Ghent, where feeder services connect with Antwerp, Bruges, Brussels, Charleroi, Liege, Mons, Namur and Tournai. A one-ton London—Courtrai Roadair consignment costs £22 10s. compared with the previous charge of £37 10s. The rate for the same load on the London—Brussels service is now £26 10s. instead of £37 10s.

Alcock and Brown Memorial in Ireland

A design has been chosen for the Alcock and Brown memorial at Clifden, Co. Galway, it was announced recently by Aer Lingus. The memorial to the two airmen, the first to fly the Atlantic nonstop, will be unveiled on June 15, the 40th anniversary of the flight. The 14-ft. memorial, in Carlow limestone, will take the general shape of an aircraft fin and will be erected on high ground overlooking the point in the bog, 1½ miles away, where the aircraft landed. A cairn is being erected on the edge of the bog within a few hundred yards of the point of landing. The design of the memorial was evolved in consultation with Mr. Seamus Murphy, R.H.A. Symbolic of flight, it is intended to honour all those who contributed to the achievement as well as the men who flew the actual aircraft. Its shape and size will throw an easily recognisable silhouette against the skyline and will also direct the attention of viewers to the cairn. The memorial is being erected by the Irish air companies with the co-operation of Clifden Town Improvements Committee.

British Airport Traffic in February

Air transport movements at United Kingdom aerodromes in February, 1959, numbered 15,702, a decrease of 1.5 per cent compared with February last year; the number of passengers handled increased by 3.2 per cent to 292,028 and freight picked up and set down amounted to 9,758.9 short tons, an increase of 22 per cent. Airports in the London area as a whole showed a decrease of 1 per cent in air transport movements and an increase of 6.6 per cent in the number of passengers handled. At London Airport there were 6,383 air transport movements, a decrease of 5.2 per cent, and 167,328 passengers were handled, a decrease of 0.9 per cent. Among the airports at which passenger traffic increased considerably over February, 1958, were Newcastle (Woolsington) by 156.6 per cent to 626, Blackbushe by 84.4 per cent to 9,069, Stansted by 78.6 per cent to 1,736, Bournemouth (Hurn) by 69.2 per cent to 1,338, Blackpool (Squires Gate) by 60.6 per cent to 853, Yeadon by 48.7 per cent to 278, Prestwick by 38.1 per cent to 11,139, Lands End (St. Just) by 23.9 per cent to 830, Scilly Isles (St. Mary's) by 23.8 per cent to 833, Islay (Port Ellen) by 21.6 per cent to 575, Benbecula by 15.8 per cent to 754 and Belfast (Nutts Corner) by 13.6 per cent to 13,981. Some aerodromes had a fall in passenger traffic compared with February, 1958, the most marked being Southend (Rochford) by 50.6 per cent to 1,839, Birmingham (Elmdon) by 37.9 per cent to 3,643, Cardiff (Rhoose) by 31.8 per cent to 1,055 and Southampton (Eastleigh) by 26.9 per cent to 920. At Channel Islands aerodromes there was a decrease from 1,493 to 1,404 in the number of aircraft movements, but the total number of passengers handled rose from 12,546 to 14,036.

SOUTHERN REGION SIGNALLING

Mr. J. F. H. TYLER, M.I.R.S.E.

• • • • • •

Since March 1, following the retirement of Mr. L. J. Boucher, Mr. John Francis Henry Tyler has been signal engineer of the Southern Region of British Railways as already recorded in MODERN TRANSPORT. He joined the signal and telegraph department of the Southern Railway in 1925 and, after a period in the shops and on general signalling work in the drawing office, was engaged on the multiple-aspect colour light resignalling schemes between Coulsdon and Brighton, and Waterloo and Hampton Court Junction. In 1935 he joined the signal department of the London Passenger Transport Board and was associated with resignalling at Cromwell Curve, at Neasden and on the Northern City Line before joining the staff of the signal and telegraph engineer, Southern Area, L.N.E.R., in 1937. There Mr. Tyler was responsible for planning the multiple-aspect signalling in connection with the Liverpool Street-Shenfield and Manchester-Sheffield-Wath electrification schemes and was also responsible for the planning and installation of the first sequence switch interlocking at Doncaster until the suspension of major new works was brought about by wartime conditions. In 1942 he became assistant (general) and when the chief engineer's office was formed was made assistant (signals). Joining the Great Western Railway as assistant to the signal and telegraph engineer in 1947, he became assistant signal engineer, Western Region, in 1952. Five years later he was appointed assistant signal engineering officer, British Transport Commission headquarters, relinquishing that post to take up his latest appointment. In 1942-47 he was a part-time lecturer in telecommunications at Enfield Technical College and from 1947 to 1949 and again from 1957 was British Railways representative for signalling and telecommunications at meetings of the International Union of Railways. A member of council of the Institution of Railway Signal Engineers from 1946, he was elected president for 1958-59 and last week concluded a most successful year of office. He has taken up his new appointment at a time when the resignalling of the Kent Coast main line in connection with the first phase of the Kent electrication scheme is almost complete; preparations are now being pushed forward for the second part of this extensive programme.

IN PARLIAMENT

Another Big Rail Deficit?

B.T.C. REAPPRAISAL SOON

THE British Transport Commission had been the greatest sufferer from the policy of "economic stagnation and the holding down of production" exercised by the Government, said MR. ERNEST DAVIES during the debate on the Budget on April 13. Furthermore, during the first 12 weeks of this year, its freight traffics fell by a further £6¼ million over 1958, which itself was a very bad year in which there was a substantial decline in traffics. There was no increase in production and no expansion there to which the Chancellor had so optimistically referred. In his Budget speech the Chancellor had said that he would reduce by only £6 million the sum allocated for financing the Commission's deficit during the current year.

The deficit financing last year cost the Treasury £94 million, which, presumably, meant a deficit of about £90 million with about £4 million accrued interest, and in 1959 the amount allocated below the line was £88 million, which again included deferred interest. It was reasonable to assume that the Chancellor had estimated a deficit of about £85 million on British Railways during the current year. If that was so, he was not looking forward to a substantial increase in production and a rise in traffics on British Railways. There was, moreover, only £57 million left to finance the deficits in the three years 1960-62.

The change in the public service vehicle excise tax did not go nearly far enough. In the Tilling and Scottish Omnibus groups working expenses were shown as 24.87d. and 24.24d. per mile respectively in 1957; the saving was only about ¼d. per mile for a doubledecker on town services and the existing losses on unremunerative routes were very much more than that.

Mr. Davies said he considered the only effective palliative that could be provided for the road passenger services, which would enable them to continue to operate a number of the unremunerative services which were today threatened with elimination, was to have a tax reduction, or a tax exemption, as far as public service vehicles using diesel oil were concerned.

Survival of Bus Industry

Survival of the public transport industry as a social service was threatened and at this time, when the Chancellor had an opportunity to make concessions, he could have made concessions to the industry to enable it to continue to operate as a public service. Even so (added a dutiful Mr. Davies), "I consider any concessions which he makes as only a palliative, because the ultimate solution lies in the nationalisation of the industry. As long as transport is operating as an unplanned industry, it cannot, in the long run, provide the public services quite rightly demanded by the public."

In a written answer, the Minister of Transport, MR. H. WATKINSON, said that the British Transport Commission hoped to let him have its report on the re-appraisal of its modernisation programme during May. He intended to publish the report as soon as possible after that.

Service Stations on Motorway

Questioned about servicing arrangements on the London—Birmingham motorway, the Minister of Transport said he proposed for the present to develop fully two service areas, at Newport Pagnell, and at Watford Gap in Northamptonshire. Each area would contain petrol filling stations, emergency breakdown and repair facilities, catering services for commercial drivers and private motorists, toilets, telephones, and parking space. It was not his intention at this stage to permit overnight sleeping accommodation. Licensed premises would not be allowed, although the successful tenderers might apply if they wished to the licensing justices for a table licence.

C.V. Parking in Marylebone

Replying to an Opposition amendment motion concerning the draft St. Marylebone parking meter order, MR. G. R. H. NUGENT, Joint Parliamentary Secretary, Ministry of Transport, said that he understood the St. Marylebone Borough Council was proposing amending orders to cover commercial vehicles and the question of Saturday morning parking. Westminster would also present an amending order regarding Saturday morning parking. He had received that day a preliminary report on the disc parking scheme operating in Paris. The cost and the number supervising were at least three times as heavy as the meter scheme here and the offences problem seemed heavy. This scheme was not suitable for our narrow streets. If and when a town came forward with such a scheme, and it was suitably laid out for the purpose, the Ministry would consider it.

★

CARRIAGE VENTILATION

R.T.S. Vent-Axia Unit

NEW literature issued by Rail Traction Supplies, Limited, Locomotive House, Buckingham Gate, London, S.W.1, which illustrates and describes the recently-introduced Vent-Axia power-operated railway ventilator cowl unit, makes a timely appearance in view of the increasing interest being shown in the effective ventilation of railway vehicles. Undoubtedly the ideal solution is full air conditioning and this has already been applied in various countries to certain luxury and first-class stock. But for general purposes, on the grounds of cost and engineering requirements, a practical compromise has to be accepted and it is in this field that the Vent-Axia unit finds its application.

The brochure fully describes the construction and performance of the ventilator and illustrates some current production and experimental applications by operators in various parts of the world, including Rhodesia where some 800 units will soon be in use. Among advantages claimed for the Vent-Axia railway ventilator are reliability and efficiency, ease of fitting, low maintenance requirements, quick delivery and efficient spares service and that it uses standardised units in volume production and is dust- and tamper-proof.

It is pointed out to us that the note headed "Nigerian Railway Progress" in our issue of April 4 referred to the net loss on working at mid-October, 1957, as £524,000, while omitting to point out that the net profit before interest and taxation at the end of the financial year 1957-58 was £817,737; the residue after deduction of interest and tax deferred was £7,737.

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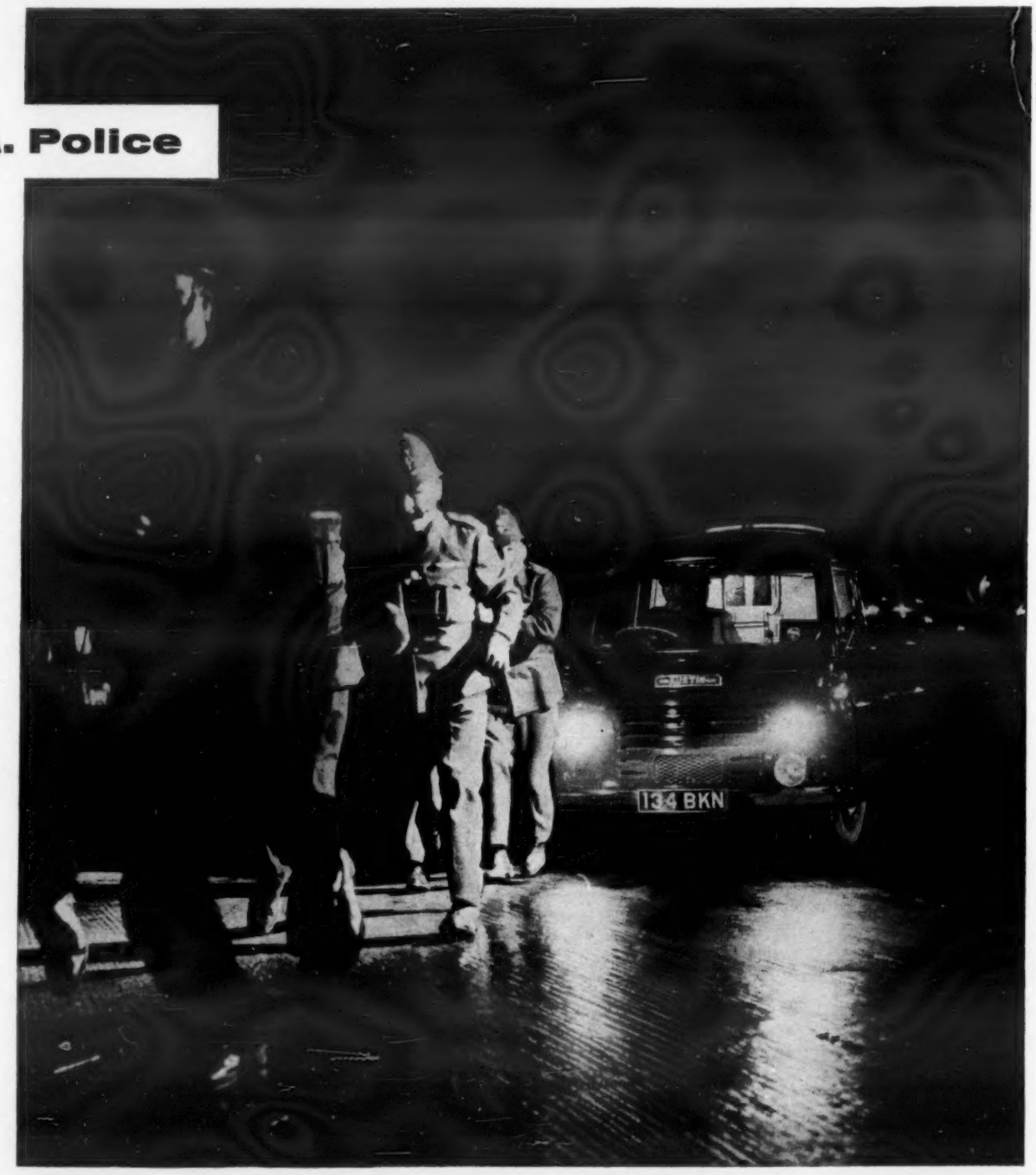
Austin and the P.L.A. Police



IN 1802 a hundred men, armed with musket and cutlass, guarded London's first commercial docks. Today the tidal reaches of the Thames, 69 miles from the Estuary to Teddington, are controlled by the Port of London Authority.

The five great dock areas—in Wapping and Shadwell, Rotherhithe and Bermondsey, the Isle of Dogs, North Woolwich and Tilbury—are protected by the P.L.A. Police. At the dock gates, on the quays, in the roads, round the warehouses, they are on guard.

Riches of the world The P.L.A. are probably the largest warehouse-keepers anywhere. Their tall gaunt buildings, clustered about the docks, hold the world's wealth. Wine and wool, tea and tobacco, rubber, meat, drugs and timber, oil, ivory and ostrich feathers. Dockland is rich in temptation, its protection a man-sized job.

The 600 men who make up the P.L.A. Police are highly trained, highly skilled, ready, when trouble flares up to assemble at a moment's notice. Night or day, the P.L.A. Police are constantly on the alert. The mobile part of the force is soon at a danger spot.

At a moment's notice A mobile force needs dependable transport. The Port of London Authority have chosen Austins. Their police vans are likely to be needed anywhere, at any time, to carry any and every kind of load. Speed, manoeuvrability and large capacity are essential. The P.L.A. Police find what they need in Omnivans.

And more besides Load space in the Austin Omnivan is exceptional—200 cubic feet for a good 15 cwt. Low floor and wide rear door make for easy loading. All-steel monoconstruction gives great strength—with lightness. Power from 1500 c.c. O.H.V. engine. Luxury comfort in cab. 12 months' warranty and the backing of B.M.C. Service—Britain's best service and parts organisation.

See the Omnivan at your Austin dealer's. Ask him, too, about the rest of the Austin commercial range: ¼ ton to 7 tons plus prime movers for gross train weights up to 15 tons.

AUSTIN

THE AUSTIN MOTOR COMPANY LIMITED
LONGBRIDGE · BIRMINGHAM

SCOTTISH BUS CONFERENCE

Discussion on Accountancy

AID TO TRANSPORT MANAGEMENT

THE paper by Mr. John Cooper, "Management Accountancy in P.S.V. Transport," presented to the annual conference of the Scottish Road Passenger Transport Association at Turnberry and published in abstract in our last issue, was brilliantly introduced by the author, who illustrated his remarks with cartoons and diagrams in great profusion. At the invitation of the S.R.P.T.A. president, Councillor R. A. Raffan, the discussion was opened by Mr. Leonard C. Hawkins, member, London Transport Executive.

He quoted a remark once made by Sir Charles Reynold: "I am not an accountant myself but I simply cannot conceive of running a business and not wanting to know in terms of money what is happening and what is likely to happen. I employ an accountant to prepare pictures for me because I want them and because money is the medium in which the greatest number of inferences can be expressed in common terms." He was sure that if Sir Charles Reynold had been there that morning he would have approved of the pictures which Mr. Cooper had provided.

Looking Forward, Not Back

When he first went to London Transport they, like everyone else, concentrated on what was known as historical accounting, with up-to-date or weekly statements of financial results, until one day Lord Ashfield said to me: "The figures which you and your people prepare and present to us are very good and very useful, but what I want to know is not so much what has happened as what is going to happen unless I do something about it." Just that remark changed their tradition completely and they began to look forward instead of backward; it led to the development of the budgeting system which we now employed fairly extensively, because, you find at once that you are bound to bring into focus all the peculiar problems with which you are likely to be faced. "Having shown yourself where you hope to go, having set your course, you have then got a target against which you can measure what you are actually doing."

"Mr. Cooper," continued Mr. Hawkins, "says that the management accountant should be responsible for budgeting or forecasting. I am going to ask him whether he wants us to take that quite as literally as the words themselves would seem to imply. In London Transport we do not accept that it is the statistical accountant who is responsible. It is true that he has to do all the figure work, but the responsibility for the figures in the budget is the responsibility of the operators, engineers and administrators. That means that when the figures come through, if the actual figures differ, as they often do, from the target, the operator cannot say: 'Oh, but this is an accountant's forecast. I know nothing about it.' It is his own forecast and he has to live up to it."

Ticket Machine Theory

"We are coming to the conclusion that what we really want is a ticket machine with a much larger range of fare values, not the 12 or 13 or whatever it is, but possibly something going up to 10s. Your ticket machine will then do two things. It will contain within itself the ticket roll, like the ticket roll in a cash register. It will record on this roll every ticket that is issued and the stage point at which it is issued, and the machine at the same time will summate the total values so that when the conductor hands in his machine at the end of the day, the amount of money he has to account for is arrived at not by complicated calculations on a waybill but simply by the deduction of the starting total from the finishing total recorded in the machine itself. We shall then have within the machine this continuous record and if we want it we can then get whatever traffic analysis we need.

"Then perhaps I might refer also to this question of comparisons. I suppose no one has suffered more from the comparisons with other undertakings than London Transport has, so much so, that at times people forget that we run an underground railway as well as buses, and that fact alone is likely to influence everything we do whether it is on the rail side or the road side. Then there are so many differences in the conditions under which different undertakings operate." In the L.T.E. Central Area buses the miles from a gallon of fuel varied from 7½ miles on some routes up to 12½ miles on others; that is a difference between 100 and 166 for groups operating in that one confined area.

Thin Rural Routes

Mr. H. Bottomley, general manager, Ribble Motor Services, Limited, said that when he saw his weekly returns he could judge whether too much mileage was being run on any particular function. But whereas on frequent town services the headway could be widened if receipts fell, hourly interurban services were more difficult if revenue fell below cost of operation. Even more difficulty might be felt in adjusting rural services that already ran only every two hours or on certain days of the week. If the service was cut down, what did you do with the bus saved? But often a reduced frequency did not save a vehicle and saved very little in hours paid for to the drivers and conductors. In reply to Mr. Bottomley's appeal Mr. Cooper said that the only accountant who could help in such circumstances was the Treasury. If a vehicle were standing idle it sometimes cost only 6d. or 7d. a mile to put it on the road.

Mr. James Amos, chairman, Scottish Omnibuses, Limited, was glad that it had been pointed out that conditions differed so much between one undertaking and another. In a time when traffic was falling and costs rising the accountant was invaluable in demonstrating trends and in presenting figures to the general manager so that he could illumine the position for the directors or committee men. They must also convince the unions and through the traffic commissioners persuade the public that they were honest people doing a really honest job, trying to provide an efficient service at the minimum cost. Public relations meant taking your staff with you, the unions with you, and the public with you. The industry needed a prolonged period of peace in which to do some quiet thinking.

Praising the paper, Mr. Rowland Moore, general manager, Sheffield, said there was a very important truth in the paragraph which said it was stressed that many savings apparently arising out of a particular process were often more attributable to the revision of procedures that was necessary before the machines could be put into operation. The paper also drew attention to the threat in the municipal world of a revised standard form of accounts which was going to take away a good deal of the value of the existing form.

It was asked by Mr. R. Mackenzie, general manager, Scottish Omnibuses, Limited, if the profit motive were abandoned what motive would Mr. Cooper suggest? The major causes of differences in costs were geographical and operational; there was a broad relationship between high revenues and high costs and between low revenues and low costs, because the factors which influenced high revenue were largely those which influenced high costs. Mr. Cooper, replying to this point, said he had not decried the profit motive, but he did suggest that failing that, the statistical comparison must be used.

Mr. Donald Sinclair (general manager, Birmingham and Midland Motor Omnibus Co., Limited), referred to the need of reviewing, at least once a year, the forms on which information was gathered and Mr. W. M. Little, general manager, Edinburgh, asked whether we were within reach of computer-compiled timetables. Mr. S. Kennedy (chairman, Tilling Group Management Board) said that in one group of companies, accounts were not prepared on an absolutely standard basis; how would separate municipalities do it?

A cordial vote of thanks was wittily proposed by Mr. J. Mackle, then vice-president of the Association, but subsequently installed as president, 1959-60, as already recorded in our columns.

The Social Side

As usual, the social side of life at Turnberry was well catered for. The winners of the competitions were as under:

Golf (Silver Quaich): First, Mr. Norman Harris and Mr. J. S. Lees; second, Mr. W. Alexander jnr. and Mr. G. Lawson; tie, won on better inward half.

Pitch and Putt (John Sword Cup): First, Mrs. A. B. Evans; second, Miss G. Cameron Phelps.

Putting: First (gentleman), Mr. J. Cameron Phelps; second (gentleman), Mr. C. H. Mason; First (lady), Mrs. H. Joy; second (lady), Miss G. Cameron Phelps.

Bowling (Winning Rink): Mrs. W. Johnstone, Mrs. J. W. Shirley, Mr. R. Mackenzie, Mr. M. M. Timmins.

At the annual dinner, presided over by Councillor R. A. Raffan, the toast "The Scottish Road Passenger Transport Association" was wittily proposed by Mr. D. M. Sinclair, general manager, Birmingham and Midland Motor Omnibus Co., Limited, and the president replied in the same vein with an account of the sub-committee set up under a Burns enthusiast to investigate the problem of where Mary Campbell was buried.

Mr. J. Mackle, president-elect, proposed "The Guests" and said that he was so impressed by the hospitality of his Scottish friends that he was really in a better position to respond to the toast than to propose it. The response was by Councillor Norman Harris, chairman of Southend-on-Sea Corporation Transport. The Aberdeen Ladies Pipe Band gave some performances on the Thursday of the conference.

★

TRANSPORT TO THE GROCER

(*Continued from page 7*)

but at South Tottenham it has been necessary by reason of space limitation to retain some older 15-ft. units. By no means the whole of the fleet is engaged on deliveries; there are many collections, for which purpose flat platform trailers are used, from railway depots, warehouses and the docks. Dock and wharf collections are now handled by Burgh Heath alone, in order to reduce wasteful duplication of vehicles at individual collection points. By this approach the work of 14 vehicles is now done by six and Burgh Heath redistributes imported goods to other depots. The depots continue to contribute a quota of vehicles to this dock service; its operation alone is centralised on Burgh Heath. Deliveries to shops are on a bi-weekly basis to the central core of the area, elsewhere weekly.

Warehouse Operations

Operation of the Kinloch plan has resulted in heavier pressure on this distribution system. At the depots the general pattern of handling is that incoming stocks are warehoused by fork-lift or similar trucks but delivery from stock to loading platform and thence to vehicle is still by hand truck, experience being that in the prevailing circumstances conveyors cause a piling-up of goods on the platform. However, small lots are made up in shelved containers which travel in the vehicle. The normal method of working is in any event that spare semi-trailers are loaded during the day for the following day and work can thus be spread smoothly and economically over the day. At Seer Green output is up by some 15 per cent without a proportionate increase in staff.

Warehouse work has been somewhat reduced as a result of heavier ordering. Previously much time was devoted to breaking down packages in order to meet small orders, which frequently had to be remade in second-hand cartons or tied with string. The current trend is for orders in cases rather than in dozens.

Heavier Loading of Vans

From the strictly transport viewpoint the most noticeable consequence has been the heavier loading of vans arising from larger consignments. Whereas the average number of deliveries used to be 24 in an 8-ton vehicle it is now only about 12. The typical delivery, it seems, is thus 15 cwt. It might be thought that the arrival at the shop of such a weight at one time would cause embarrassment to the trader and resultant delay to the van. In practice it seems that foreknowledge of the arrival of the van, which keeps to a fairly close schedule, overcomes this situation. It is probably an advantage to the retailer that he should receive the greater part of his supplies at one time, rather than in a series of deliveries which distract him from his primary business of attending to customers.

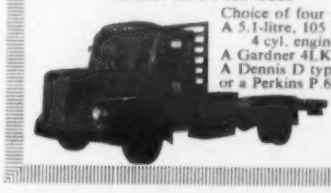
Ordering has undergone some modification. Hitherto it has been the custom for the Kinloch representative to note requirements at each call, but with the growth of business this has proved a lengthier task in some instances. It is hoped to persuade the grocer to do the ordering himself on the form provided—later this form may be partially preprinted to indicate the lines available. Such procedure would leave the representative more time to sell specialities when he calls.

"NOW . . . this *is* a low loader!"

"Sure. The lowest on the road, and as steady as a rock. Just reach for one of those crates and see how easy it is to get at."
"This is my lucky day. I'll have the lot off in a jiffy while you sit there in comfort."
"Comfort's the word! Cushioned seat. Perfect driving position. Easy in and out, and the 3-man cab's been restyled with a one-piece screen. DENNIS is a driver's paradise."

The DENNIS range of commercial vehicles covers literally every type from light vans to giant 8-wheelers . . . with bodywork for every conceivable purpose.
The name DENNIS, too, is synonymous with quality, with a standard of craftsmanship in which the words "hand-made" play a great and important part. That is why the world's really BIG transport operators base their fleets on DENNIS.

The DENNIS 'PAX' Normal Control Low Loader for 5-6 ton loads



Choice of four engines
A 5.1-litre, 105 h.p. 4 cyl. engine.
A Gardner 4LK engine.
A Dennis D type Petrol or a Perkins P.6 engine.

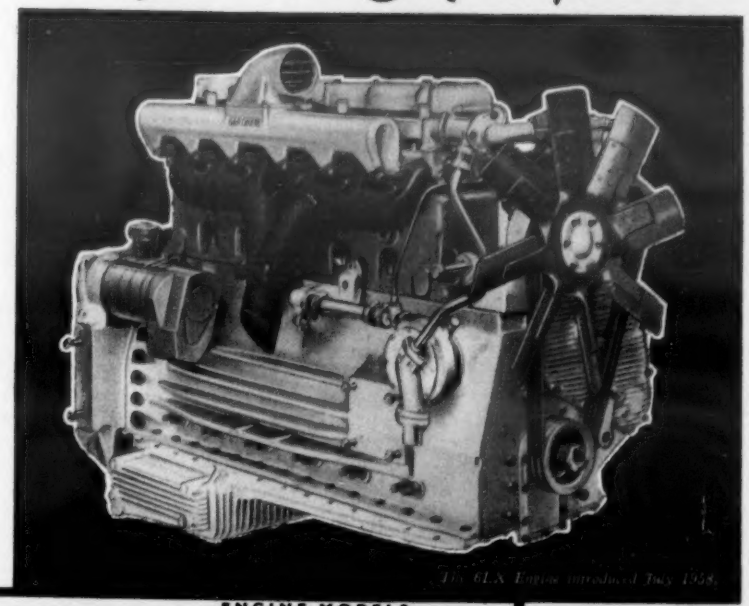
DENNIS PAX
NORMAL CONTROL LOW LOADER for 5-6 ton loads

DENNIS BROS LTD GUILDFORD

GARDNER DIESEL ENGINES

FOR PASSENGER & GOODS ROAD VEHICLES, RAIL CARS AND LOCOMOTIVES, MARINE PROPULSION, MARINE AUXILIARIES, AIR COMPRESSOR SETS, MOBILE CRANES, EXCAVATORS, TRENCH CUTTING MACHINES, ROAD GRADERS, INDUSTRIAL POWER PLANT, ELECTRIC GENERATORS, ETC.

Power for every purpose



The 6LX Engine introduced July 1958

Engine Types	Applications	ENGINE MODELS Number of Cylinders 2	3	4	5	6	8	R.P.M.
		B.H.P.						
LW	Road Transport Vehicles	—	—	75	94	112	—	1,700
LW	Rail Cars & Locomotives	35½	53½	71	89	107	—	1,700
LW	Marine Propulsion-Heavy Duty	28	42	56	70	84	—	1,300
LW	Marine Propulsion-Light Duty	31	47	62	78	94	—	1,500
LW	Marine Propulsion-High Speed Craft	—	—	71	89	107	—	1,700
LW	Industrial, El.gen., Mar. Aux.	24	36	48	60	72	—	1,200
LW	Intermittent Duties	29	43	58	72	87	—	1,400
6LX	Road Vehicle & Rail Traction	6 cylinders—150 b.h.p. at 1,700 r.p.m.						
HLW	Road Transport Vehicles *Horizontal*	—	—	75	94	112	—	1,700
HLW	Rail Traction *Engines*	—	—	71	89	107	—	1,700
L3	Rail Cars & Locomotives	—	—	102	128	153	204	1,200
L3	Marine, Ind., El.gen., Mar. Aux.	—	57	76	95	114	152	900
L3	Intermittent Duties	—	—	85	106	127	170	1,000
4LK	Road Vehicle & Rail Traction	4 cylinders 57 b.h.p. at 2,100 r.p.m.						
1L2	Industrial Duty & Marine Auxiliaries	Single cylinder 9½ b.h.p. at 1,000 r.p.m.						

See our exhibits on Stand 16, Row K, Ground Floor, Grand Hall at the Engineering, Marine, Welding and Nuclear Energy Exhibition at Olympia, London, April 16th—30th.

NORRIS, HENTY & GARDNERS, LTD.
(Proprietors: L. Gardner & Sons, Ltd.)
PATRICROFT · MANCHESTER

London: Abford House, Wilton Road, S.W.1. Glasgow: 124 St. Vincent Street, C.2.

farmer

SILVER ROADWAYS LTD.

Reliable Trunk Services to all Parts

BRISTOL
8 The Grove, Bristol 1
BRISTOL 22313

CARDIFF
10 Dumfries Place
CARDIFF 31631

GLASGOW
12 Dixon Street, C.2
CITY 3381

BIRMINGHAM
323 High St., West Bromwich, Staffs.
WEST BROMWICH 2001

SWANSEA
Exchange Buildings
SWANSEA 54171/5

LIVERPOOL
11 Old Hall Street, Liverpool, 3
CENTRAL 6306

LLANELLY
Morfa Works, Llanelly
LLANELLY 4302

TAVISTOCK
Harford Bridge
TAVISTOCK 2374

NOTTINGHAM
Pavilion Building, Pavilion Road
West Bridgford
NOTTINGHAM 83481

LONDON 22-24 Bermondsey Wall West, S.E.16 BERmondsey 4533

OFFICIAL NOTICES

THE POTTERIES MOTOR TRACTION COMPANY LIMITED

TECHNICAL ASSISTANT

THE Potteries Motor Traction Company Limited operating over 500 buses and coaches in North Staffordshire, invite applications for the position of Technical Assistant to the Chief Engineer.

Applicants should be under 30 years of age, and possess a sound technical training, together with experience in the operation and maintenance of public service vehicles.

Salary will be in accordance with qualifications and experience.

Applications, which will be treated in confidence, should be sent to the General Manager, Potteries Motor Traction Company Limited, Woodhouse Street, Stoke-on-Trent, to arrive not later than May 6.

Each application should include a front cover sheet setting out:

(*a*) Name and address.
(*b*) Age.
(*c*) Whether married or single.
(*d*) Education and technical qualifications.
(*e*) Present appointment.
(*f*) Present salary.
(*g*) Previous appointments.

Envelopes to be marked "Confidential—Technical Assistant."

CORPORATION OF GLASGOW

TENDERS are invited for the supply of:

179 Double Deck Motorbus Chassis;

179 Double Deck Motorbus Bodies;
or
179 Double Deck Motorbuses complete.

Specification and forms of tender obtainable from the General Manager, Transport Department, 46 Bath Street, Glasgow, C.2, to be returned to me by 10 a.m. on Monday, June 8, 1959.

City Chambers, Glasgow. WILLIAM KERR, Town Clerk.

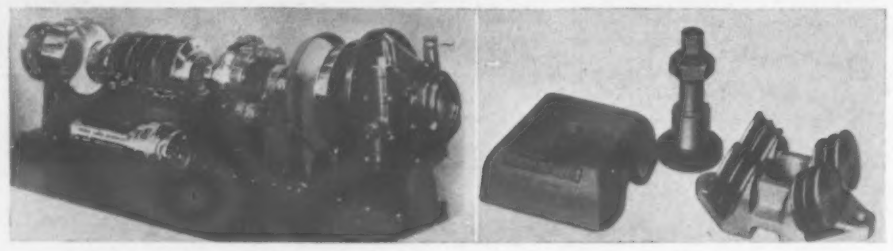
[Another Official Notice appears on page 15]

ENGINEERING EXHIBITION

Nuclear Energy Equipment Developments

OPEN AT OLYMPIA UNTIL APRIL 30

LATEST developments in nuclear energy equipment, including plant for ship propulsion, and the rapidly expanding part played by automatic and remote-control devices in engineering are given emphasis at the Engineering, Marine, Welding and Nuclear Energy Exhibition, which opened at Olympia on April 16 and continues until April 30. As well as commercial firms in these fields, of which there has been a great increase in number since the last exhibition nearly two years ago, the Royal Navy has adopted the theme of automatic and remote control on its stand, which includes models of nuclear machinery for future submarines designed by Rolls-Royce, Limited, and the Atomic Energy Research Establishment.



Running gear of the Self-Changing Gears oil-operated marine gearbox and, right, components of the new Metalastik Cushyfoot adjustable flexible mounting

Moved forward in the calendar from its traditional autumn date, the current exhibition occupies the three huge halls at Olympia comprising more than 250,000 sq. ft. of stand space and carries over 1,000 categories of engineering products. The majority of the 500-or-so exhibitors have something new on show and it is clear that all are aware of the opportunities afforded by this important biennial event of showing their wares to the buyers from more than 70 countries and to the organised parties from 72 leading professional, technical and trade associations expected to attend.

In these days when it is considered by some to be fashionable or clever to denigrate British influence and importance in world affairs, it was refreshing to listen to Sir Edward Thompson, president of the British Engineers' Association, who opened the exhibition. Sir Edward said that the British engineering industry had more than kept pace with the rapid expansion of industry throughout the world and that its gross output had now reached an annual value of six thousand million pounds. People too ready to accept the gloomy prognostications of some critics of the shipbuilding industry during recent years were probably surprised to learn that the tonnage currently under construction in our yards was twice as great as that of any other country and that the latest figures showed that 22 per cent of the world's new tonnage was now under construction in United Kingdom shipyards.

British progress in nuclear power production was well known, said Sir Edward, and the challenge set by the bold nuclear power programme had been well met by industry; this was demonstrated by the fact that more than one-third of the exhibitors at Olympia, including firms that made all kinds of conventional equipment, had also developed a range of products specially designed or modified for use for atomic energy. The section of the exhibition devoted to welding indicated some of the spectacular advances made during the past two years, both in automation in that branch of the industry and in the achievement of extremely high quality in the welding of new and highly recalcitrant materials for atomic reactors.

Outstanding Engines

Among various power plants what are claimed to be the world's largest free-piston-engined power station, largest turbogenerator and largest air-cooled diesel engine are all represented. The power station is exhibited by the Free Piston Engine Co., Limited, and is a scale model of the installation undertaken by that company at St. James, Singapore, which employs no fewer than 48 GS34 1,000-b.h.p. free-piston gasifiers and has a capacity of 36 MW. Also on the stand is an actual GS34 gasifier coupled to a turbine and gear unit and fitted for marine application.

Thornycroft 24-ft. reinforced-plastics work boat with vertical tiller in place of the usual wheel to provide easier and quicker control

The large turbogenerator by C. A. Parsons and Co., Limited, is a 550-MW unit for the Central Electricity Generating Board's Thorpe Marsh power station and is also represented on the Parsons stand by a model, where it is supported by drawings and diagrams. The company's work in the nuclear field is illustrated by an animated model of a complete 400-MW nuclear power station. All the exhibits on the stand shared by Ruston and Hornsby, Limited, and Davey, Paxman and Co., Limited, are new and they include the Paxman Vega diesel engine, which at 466 b.h.p. in the largest size is claimed to be the largest air-cooled diesel in production. Also on view are the 12-cylinder Paxman Ventura from the 500-1,870 b.h.p. range, examples from the new Ruston AT 705-1,685 b.h.p. range and the first Ruston atomic-energy product—a reactor gas circulator with gas bearings.

Mighty Deltic

The latest stage in the development of that remarkable diesel engine, the Napier Deltic, is illustrated by D. Napier and Son, Limited, with a first public showing of a turbocharged 18-cylinder unit which, complete with gearbox, mounting feet and air starting equipment, has a dry weight of only 12,700 lb. and overall length of a mere 155 in. Nine-cylinder turbocharged Deltics are also in production and with maximum outputs of over 3,000 and 1,500 b.h.p. respectively at 2,100 r.p.m. these engines are unapproached in terms of low specific weight and specific bulk by any other design of comparable power in production.

Although invaluable in fast naval craft, where space and weight savings are essential, the advantages of the great specific power of the Deltic are by no means confined to such exotic applications. The flexibility both of installation and operation of commercial craft is illustrated on the stand by a model of a four-Deltic ship's engine-room, while application of both sizes of engine to

A.C. GENERATORS
for Diesel Locomotives

Design provides for maximum output to be obtained at engine idling (with suitable drive ratio) and over a wide speed range. Generators are lighter than equivalent D.C. machines to give the same performance. The heavy current windings are stationary, thus obviating the need for commutation, and simplifying maintenance. When a D.C. output is required, suitable rectifiers (germanium or selenium according to conditions) are available.

C.A.V.

The World's Leading Manufacturers of
FUEL INJECTION & ELECTRICAL EQUIPMENT
C.A.V. LIMITED, ACTON, LONDON, W.3

AP/932

British Railways locomotives and the Deltic Compak generating set, which is the only equipment of its power capable of being air-lifted, are also demonstrated.

Extension of the application of diesel engines developed initially for automotive purposes into the marine and industrial fields is illustrated by stands occupied by such manufacturers as Thornycroft, Leyland, A.E.C. and Perkins. Featured in the Perkins range is the first direct-injection engine by that company, the Four 270D, which has outputs at 2,000 r.p.m. of 58 b.h.p. in marine and 56½ b.h.p. in industrial forms. Also shown are marine and industrial versions of the remarkable little Four 99, which has a maximum rating of 40 s.h.p. at 3,000 r.p.m., and the recently introduced range of Perkins outboard motors of up to 35 h.p. The A.E.C. stand carries two recently introduced diesels—the four-cylinder AV312G with a maximum output of 75 b.h.p. at 2,000 r.p.m. and the large six-cylinder 360-b.h.p. turbocharged AVT1100G. Turbocharging is now applied to all A.E.C. six-cylinder engines and, apart from the A209 indirect-injection marine unit, all the engines shown incorporate well-proved long-life features.

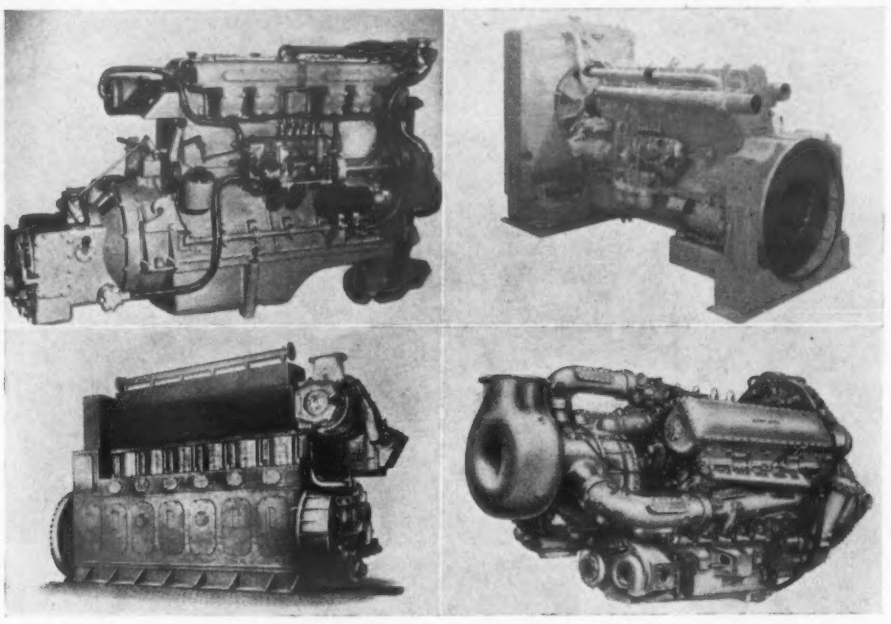
The Leyland range covers outputs from 70 to 275 b.h.p. and the largest unit, the Ajax Argonaut marine propulsion engine, is shown in turbocharged form. The Simms-Eberspächer turbocharger is water-cooled and a sight glass is fitted in the system to prove the flow of coolant to the turbocharger. Several of the Leyland industrial and plant engines are shown coupled to Self-Changing Gears hydrodynamic torque converter-sion for railway bogies and vibration dampers.

Silicone-filled viscous vibration dampers are also shown by the Holset Engineering Co., Limited, which company emphasises their suitability for all types and sizes of engine by reference to a recently supplied viscous damper weighing 13 tons and 93 in. in diameter which was produced for a 10,000-h.p. marine diesel. Progress in turbocharger production since the Holset company acquired European manufacturing rights in the successful American Schwitzer design 18 months ago is indicated by examples from the current range covering engines from 50 to 750 h.p. Service applications are illustrated by the showing of Rolls-Royce six-cylinder and Paxman V12 engines fitted with Holset-Schwitzer turbochargers.

Sintered-Metal Components

Increasing scope of sintered-metal components is apparent on the stand of Machine Products, Limited, where components on display include piston-rod guides, damping plates, thrust plates, stator cores and various gearwheels and sprockets. Components of sintered iron, steel, bronze and brass are being produced and the high-density materials are intended to replace costly machining operations giving many of the desirable characteristics of forged or machined parts.

The value of efficient filtration of air, fuels and lubricants in increasing the useful life of engines and machines is becoming more fully appreciated, and keeping pace with a wider use and growing efficiency of filtration equipment of all kinds has been the rapid expansion of the Birfield



Diesel engines at the show include the Thornycroft RZ6 of 125 b.h.p. at 1,600 r.p.m., the A.E.C. AV1100 which provides power from 200 to 360 (turbocharged) b.h.p., an example of the Ruston AT range for marine powers from 600 to 1,500 s.h.p. and, bottom right, the compact turbocharged Napier Deltic 18 of 3,100 b.h.p.

coupling transmissions, which the Coventry company manufactures under Schneider licence. Thornycroft diesels range from the 12½-h.p. twin-cylinder RJD2 to the new turbocharged 200-b.h.p. RKRN6S six-cylinder unit. The company also exhibits a reinforced plastics 24-ft. work boat built at its Hampton yard.

Developed directly for marine and industrial purposes are the latest air- and water-cooled diesels of Lister Blackstone Marine, Limited, which range from 8½ h.p. upwards. The new JK water-cooled series is represented by three- and six-cylinder units of 46½ and 87 h.p. respectively, while a Rootes-Lister three-cylinder opposed-piston two-stroke diesel is shown driving a 50-kW alternator and two-stage air compressor. The sister company, Lister Blackstone Rail Traction, Limited, shows the 12-cylinder 1,100-h.p. rail-traction diesel and a new 0-4-0 light industrial locomotive powered by a Lister six-cylinder 60-h.p. diesel driving through hydrostatic transmission.

Large Marine Units

The massive diesel engines developed for a variety of purposes by Harland and Wolff, Limited, are represented on that company's stand. Four-stroke engines, which cover a power range from 200 to 5,000 b.h.p., include a turbocharged six-cylinder unit of 570 b.h.p. at 600 r.p.m. and a model of a V-type turbocharged engine coupled to an alternator of 3,500 kW capacity. The two-stroke range which has become so popular in tankers and other large ocean-going vessels is represented by a working model of the Harland and Wolff single-acting opposed-piston crosshead type of around 10,000 h.p. The company's shipbuilding activities are illustrated on the stand by a large-scale model of the 45,000-ton passenger liner *Canberra* now under construction at the Belfast yard for the P. and O. This vessel has the distinction of being the largest passenger vessel built in the United Kingdom since the war.

Complementary to the model of the *Canberra* is a pictorial display put on by the British Thomson-Houston Co., Limited, and the A.E.I. heavy plant division, which features the turboelectric propulsion equipment being supplied for that vessel. She will have 85,000 s.h.p. at two screws, but the electric transmission is so arranged that for economical cruising 40,000 h.p. from one turbine can be transmitted to both screws while the other turbine and its associated auxiliaries are shut down. A 450-kW geared turboalternator auxiliary set, one of four on order for P. and O. 18,000-ton tankers, is also depicted while a pictorial display of diesel-electric propulsion equipment recently developed for paddle tugs sets out to show the advantages of electric transmission.

Engine Aids and Accessories

Among the various aids and accessories designed to provide more efficient installation and operation of engines and machines generally are many new products. Metalastik, Limited, introduces a new anti-vibration mounting—the Cushyfoot S—which incorporates an adjustable buffer to keep engine or machine movement in all directions within desired limits without the need for any separate control links or snubbers. Another new product is the Metalastik torque transfer coupling for fitting between engine and gearbox. Designed to give increasing stiffness with torque, it is particularly suitable for marine drives and has been adopted for the new Ruston AT marine engines. Many other industrial rubber products are shown on the stand jointly occupied by the associated companies of the John Bull group, including rubber suspen-

Group filtration company, Intermit, Limited. At Olympia, while the company illustrates examples from its well-known lines of gauze-type strainers and filters, it emphasises on its stand the two new ranges of products for which Intermit has obtained manufacturing licences during the past three years. Established items include the Comprair compressed air filter, which is made in two basic designs covering every degree of cleaning and drying of compressed air likely to be required, including completely automatic operation.

The more recent Intermit products are Far-Air filtration and air-conditioning equipment developed by the Farr Company, Los Angeles, and a wide range of Birfield-Hilco oil maintenance and reclamation equipment developed by the Hilliard Corporation, Elmira. Far-Air covers practically every application where intake air needs to be cleaned or where exhaust air or gases have to be purified before discharge to the atmosphere. Complementary equipment for the maintenance of Far-Air viscous-panel filters includes automatic and hand-operated washing and oiling machines. Birfield-Hilco oil filtration and reclamation plant is produced for dealing efficiently with most types of oil and because many oils in modern use are treated with additives, care has been taken in the design to ensure that additives are not removed during treatment.

Engine Protection

During recent years the requirements of engine governing devices have become more exacting, and to a wide range of established governors Ardleigh Engineering, Limited, has added a new electrical unit designed to meet the more-critical modern requirements. The new Ardleigh Type 500 governor, which is the first British electrical unit, has been developed to give very accurate control of a.c. generating sets in which changes of frequency due to load variation must be kept to a minimum. It operates on the principle of continuously measuring the electrical load and positioning the fuel rack according to the load signal produced. By this means the necessary adjustment of rack setting to meet a change of load takes place before the engine has time to change speed, while a second signal proportional to any speed error trims the fuel rack to cancel any slight speed drift that might occur. The governor permits any number of sets to be run in parallel and any desired ratio of load sharing.

Protection equipment of a different type is shown by the Pyrene Co., Limited, which has a wide range of fire-extinguishing products designed to meet every type of fire risk in all industries, including shipping and nuclear power, on its stand. Examples of Pyrene fire- and smoke-detection systems to provide automatic fire warning are also shown, as are the many Pyrene products for metal treatment and finishing processes. A wide range of protection equipment exhibited by the Graviner Manufacturing Co., Limited, includes fire detectors, thermostats and overheat switches, graphite components and lead shielding blocks for nuclear installations and the Graviner oil-mist detector—a photoelectric device designed to give warning of concentrations of oil mist in marine diesel engines and thus prevent crankcase explosions. New on the Graviner stand is a high-sensitivity detector which extends the principle already applied in the earlier oil-mist apparatus. The new detector, which is applicable to diesel, petrol, gas or dual-fuel engines, can sense and locate a small degree of abnormal temperature rise on working surfaces in the crankcase and provide warning of incipient faults before damage or danger can occur.

BY APPOINTMENT TO HER MAJESTY THE QUEEN
Suppliers of Fire Extinguishers The Pyrene Company Limited

Pyrene TRADE MARK FIRE APPLIANCES

A still greater range of

Fire Safety Equipment to meet all Industrial Fire Dangers

For Industry Modern fire dangers call for new developments in fire-fighting method and application. Our research facilities enable us to keep abreast of the times and new fire extinguishing equipment is constantly being produced in the form of "PYRENE," "CONQUEST" and "PHOMENE" Fire Extinguishers, Portable Units, Built-in Installations using vapourizing liquids, soda-acid, chemical foam, mechanical foam, CO_2 dry chemical and water.

•

For Ships An equally large range of specialized fire-detecting and extinguishing equipment is manufactured by us to meet the most modern demands of marine fire dangers. In addition to all types of fire extinguishers designed to comply with Ministry of Transport regulations, there are "PYRENE" Foam Installations for machinery spaces and "PYRENE" CO_2 and "PYRENE" E.D.-HOL Inert Gas installations for cargo holds. These inert gas systems operate in conjunction with "PYRENE" Smoke Detecting Installations.

•

For Nuclear Power "PYRENE" built-in installations are designed to deal with special fire dangers that are encountered in Nuclear Power Plant and Atomic Research Stations. Many built-in units of this kind have already been installed.

•

For Transport The famous "PYRENE" pump-type extinguisher has, for 45 years, been recognized as the standard of protection for all motor vehicles. London's buses and most of the fleets of buses and coaches operating throughout the country carry this protection, as well as G.P.O. mail vans, Government, Railway, R.A.C. and A.A. motor vehicles. In addition to the protection of motor transport, "PYRENE" CO_2 Installations are protecting the new diesel locos now in operation on British Railways.

A NATION WIDE METAL PRE-TREATMENT SERVICE FOR INDUSTRY

Now on show at the Engineering Exhibition at Olympia are components treated by our range of metal pre-treatments including "Bonderizing" for bonding paint to metal surfaces, the "Parkerizing" rust-proofing processes, "Parco-Lubrizing" for reducing wear on moving ferrous parts and "Bonderite/Bonderlube" aids to the cold working of metals. Our metal pre-treatment service includes free engineering advice, laboratory facilities and constant research, regular after-service calls, prompt chemical deliveries and a network of outworking facilities.

Write for full details of this range of equipment to Dept. MT4, or call at

STAND 11 ENGINEERING
Marine Welding & Nuclear Power
EXHIBITION
National Hall Gallery, Olympia

•

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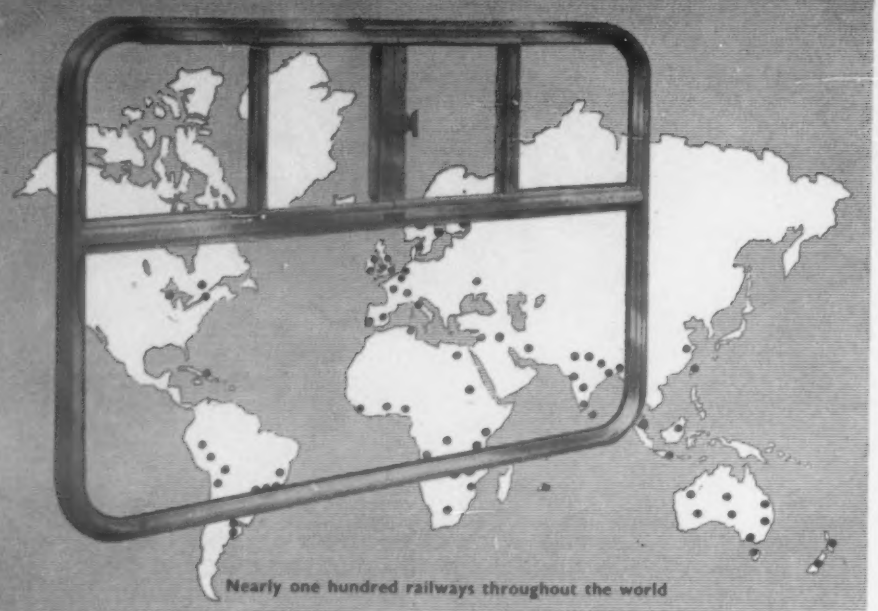
Head Office & Works: GREAT WEST ROAD, BRENTFORD, MIDDX. *Canadian Plant:* TORONTO. *Australian Plant:* MELBOURNE.

BECLAWAT WINDOWS
and Sliding Door Equipment

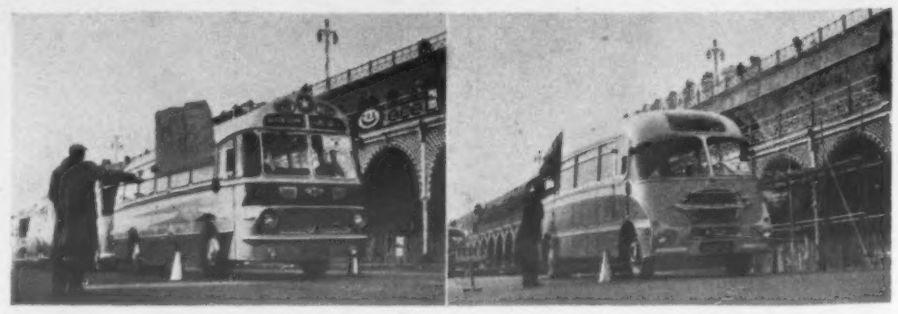


Nearly one hundred railways throughout the world
are using Beclawat equipment

BECKETT, LAYCOCK & WATKINSON LTD.
ACTON LANE, LONDON, N.W.10

BECLAWAT

FIFTH BRITISH COACH RALLY



Two of the vehicles in the fifth British Coach Rally organised by "Passenger Transport" are here seen during the driving tests at Brighton. They are a Leyland Tiger Cub with Harrington body of Silver Star Motor Services, Limited, Porton Down, and a Ford Thames of Tetbury Passenger Transport, Limited, with Burlingham bodywork

Overall winner of the rally was this A.E.C. Reliance with Plaxton Panorama body entered by Straw's of Leicester, Limited, which thus obtained the "Coach of the Year" title, the Brighton Trophy, the Redex Trophy, the A.B.C. Coach Guide Trophy, P.S.V. Circle Trophy, and Plaxton Trophy, while its driver, Mr. E. T. Straw, Junior, won the Class 3 driving award. Right, the Scania-Vabis entered by a Netherlands coach firm, Beuk Reisbureau en Touring Carbedrijf, which was runner-up, winning the Rawlings Trophy and the Howard Trophy for Continental entries; the driver also won an award. Below: left, hostess and driver of the Duple-bodied A.E.C. of York Brothers (Northampton), Limited, which, by obtaining highest marks in the concour d'elegance, received the Clacton Trophy, the Arlington Trophy and the Duple Trophy; right, the "Driver of the Year" was Mr. R. W. S. Smith, who received the "Passenger Transport" Trophy, while his employer, Comfy Coaches, Limited, Farnham, consequently won the Capasco Trophy

MIDDLESBROUGH DOCK

IMPORTS General Cargo, Iron and other Ores, Scrap Metal, Phosphates, Gunnies

EXPORTS General Cargo, Iron and Steel, Fertilizers, Motor Cars

Regular sailings to the Mediterranean, Africa, India, Far East, Australia, the Americas and West Indies

Two new cargo berths with transit sheds, modern cranes and road/rail access are in use. Mechanical appliances are available for handling general cargo

THE HARTLEPOOLS DOCKS

IMPORTS Iron Ore, Pitwood and other Timber, Kulscarp, Scrap Metal, Wood Pulp

EXPORTS Coal & Coke, Machinery, Magnesite, Basic Slag

Mechanical handling of pitwood in modern storage timber yards on the Docks estate

A deep-water berth, capable of accommodating vessels with a draft of 29 feet on all states of the tide, is specially equipped for discharge of bulk cargoes

Serving coalfields
and industrial centres of
Northern England

BRITISH TRANSPORT DOCKS

Further information from
Docks Manager
Middlesbrough
and Hartlepools Docks
West Hartlepool

Dock Superintendent
Middlesbrough

The SCAMMELL HIGHWAYMAN

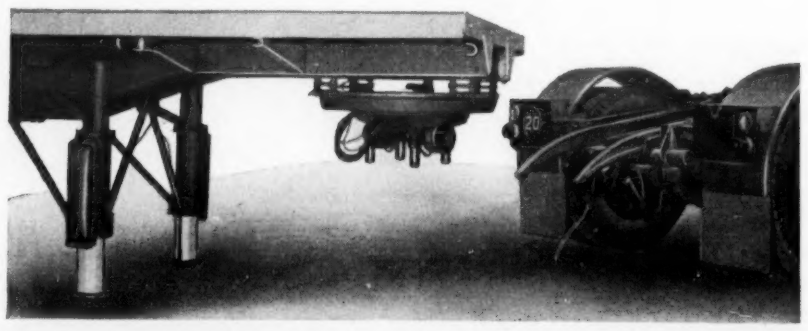
with heavy duty fully automatic telescopic leg coupling gear

BRINGS PURPOSE-BUILT FLEXIBILITY TO TRUNK-ROAD TRANSPORT

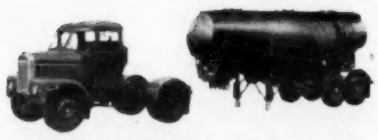
Suitability of purpose and reliability are symbolic of the Scammell HIGHWAYMAN range of articulated vehicles. The Heavy Duty Automatic Coupling Gear is an additional feature which commends itself especially to operators who use various types of semi-trailers in turn to meet seasonal demands or as mobile storage containers—a particular asset where storage facilities are limited—also to long distance haulage contractors for simple and speedy changeover of semi-trailers at interchange points on the road. Telescopic support legs on the semi-trailer and the locking hook release are operated by air pressure while instant coupling and uncoupling is effected without the driver leaving his seat.

Particularly featuring driver comfort, the new HIGHWAYMAN cab has a panoramic windscreen and large rear windows for clear all round vision. Provision is made for built-in heating and demisting, screen washers and radio.

The HIGHWAYMAN range includes tankers, hoppers, pressure containers for powdery and granular materials, and machinery transporters each forming a completely design-matched articulated vehicle to meet the particular requirements of the industries concerned.



Scammell HIGHWAYMAN articulated 8-wheeled triple compartment, frameless 3,800 gal. capacity acid oil tanker fitted with Scammell Heavy Duty Automatic Coupling Gear.



Scammell HIGHWAYMAN articulated 8-wheeled frameless powder transporter with air pressure assistance for discharging load to a height of 100 ft. or for a distance of 1,000 ft. horizontally. Fitted with Scammell Heavy Duty Automatic Coupling Gear.

SCAMMELL LORRIES LTD.
Head Office & Works: WATFORD, HERTS. Telephone: Watford 25231 & 25691

SOCIAL AND PERSONAL

International Chamber of Commerce

ON Saturday last (April 18), Mr. P. S. Henman, chairman of Transport Development Group, Limited, comprising road and water transport contractors, left by air for Canada. While there he will be studying the effects of the development of the St. Lawrence Seaway (which was to open today) and the vast possibilities thus opening up for the development of lighterage and transport generally in Canada and the United States. Transport Development Group, it is believed, can offer much in operational techniques and experience; and facilities will undoubtedly have to be created to cope with the great up-surge in traffic which the new seaway will produce. Mr. Henman represented the London Chamber of Commerce on the British national committee at the 17th biennial congress of the International Chamber of Commerce in Washington, D.C., from April 19 to 25. The F.B.I. representative on the committee was Mr. L. G. Burleigh, transport officer of I.C.I., Limited.

* * *

Lord Rootes, chairman of the Dollar Export Council, left London by B.O.A.C. Comet on April 22 for a visit to North America and the Carribean.

* * *

As announced in our last issue, Mr. S. W. Jesper, hitherto public relations and publicity officer, North Eastern Region, has been made assistant to the general manager, North Eastern Region, B.R.

Mr. S. W. Jesper

Educated at St. Olave's School, York, and Epsom College, Mr. Jesper saw service in the 1914-18 war and joined the North Eastern Railway in 1920. After experience in a number of railway departments in various parts of the country, he returned to York in 1949 to take charge of the newly created public relations and publicity department. In the intervening years Mr. Jesper has taken a keen interest in the decoration and furnishing of, in particular, station waiting-rooms. The "new look" given to many of these rooms in the North Eastern Region reflects his good taste and modern ideas. These same qualities have been evident in a great many colourful and impressive posters, as well as in advertising and floral displays produced by his department.

* * *

The final of the National Transport Football Shield Competition between Liverpool Corporation Passenger Transport and the Birmingham and Midland Motor Omnibus Co., Limited, was played at Liverpool on April 16 and resulted in a win for the Liverpool team by five goals to four after extra time. Immediately following the game, Alderman S. Part, chairman of the Liverpool Transport Committee, presented a cup, donated by Mr. Billy Butlin. The Liverpool team is the first holder of this cup, as also of the original shield.

* * *

The pension and travel facilities division of the manpower adviser's department at the headquarters of the British Transport Commission, of which the late Mr. R. Byron-Scott, principal pensions officer, was in charge, has been brought under Mr. David Robertson, principal establishment and staff officer, who has been redesignated director of establishment as from April 1.

* * *

One of the largest gatherings of recipients of Road Operators' Council Safety Awards to be held in the Midland "Red" area took place recently in the canteen at the Central works of the Birmingham and Midland Motor Omnibus Co., Limited, at Edgbaston, Birmingham. It consisted of drivers, conductors and conductresses from the Birmingham garages at Bearwood, Digbeth and Sheepcote Street and the number of awards gained totalled over 800 in the two competition years 1956 and 1957. Mr. J. L. Ransome, M.B.E., deputy chief engineer, presided, and the awards were presented by Mr. W. P. James, O.B.E., chairman of the West Midland area Traffic Commissioners.

The Dumfries coachbuilding and motor engineering business, A. C. Penman, Limited, celebrated its centenary yesterday with a dinner to shareholders, staff, employees and guests.

* * *

H.R.H. the Duke of Edinburgh has consented to become president of the College of Aeronautical and Automobile Engineering, Chelsea, for a period of one year from November. He will succeed Lord Brabazon of Tara, who has been president of the college since 1950.

* * *

Mr. A. F. Walton, operations manager (parcels), at B.R.S. headquarters, has been appointed area manager, London parcels area, with effect from May 18 on the retirement of Mr. R. W. Mitchell. Mr. Walton is succeeded by Mr. N. J. Kevan, planning officer (parcels), who becomes operations officer (parcels).

* * *

On attaining retirement age, Mr. W. Hobbs, A.C.A., has resigned the post of joint secretary of the British Motor Corporation, Limited, and Mr. E. Price has been appointed in his stead. Mr. Hobbs will continue as a director of B.M.C. and Morris Motors, Limited, and Mr. E. Price will retain his position as deputy chairman of Fisher and Ludlow, Limited, a subsidiary of B.M.C.

* * *

The National Conference of Road Transport Clearing Houses has elected Mr. T. W. Jackson (Key Warehousing and Transport Co., Limited, Hull), national chairman. He follows Mr. J. W. Ellis (Pitt and Scott, Limited, London), who retired from the chair, having served the conference for the past 10 years in this office. The vice-chairmen of the conference are Mr. R. W. Tree and Mr. D. K. Archbold.

* * *

Mr. E. C. Brashier, who has been appointed Chief of Police, North Eastern Area, B.T.C. Police, joined the Southern Railway Police in 1924. He ultimately became a superintendent in 1944. Mr. Brashier was appointed Assistant Chief of Police of the South Western Police Area (covering the railway Southern and Western Regions) in 1952 but, in 1958, consequent upon the reorganisation, he became Assistant Chief of Police of the Western Police Area.

Mr. E. C. Brashier

* * *

Mr. P. F. Lewindon, B.E.A. manager, Germany, is resigning from the Corporation at his own request to take up another appointment. The question of a successor has not been decided. Mr. M. S. Brander, hitherto B.E.A. station manager, Rome, has been appointed manager, Russia.

* * *

Mr. J. B. Fender, A.C.A., docks accountant, British Transport Docks Division, Middlesbrough and Hartlepools, has been appointed to the post of treasurer, North Eastern Region, B.R. Mr. Fender trained with Messrs. Price, Waterhouse and Company, chartered accountants, Newcastle upon Tyne, and in 1950 was appointed to a post in the London headquarters of the Docks and Inland Waterways Executive. In 1951 he became senior accounting assistant, Southampton Docks, and in 1957 was appointed docks accountant, Middlesbrough and Hartlepools.

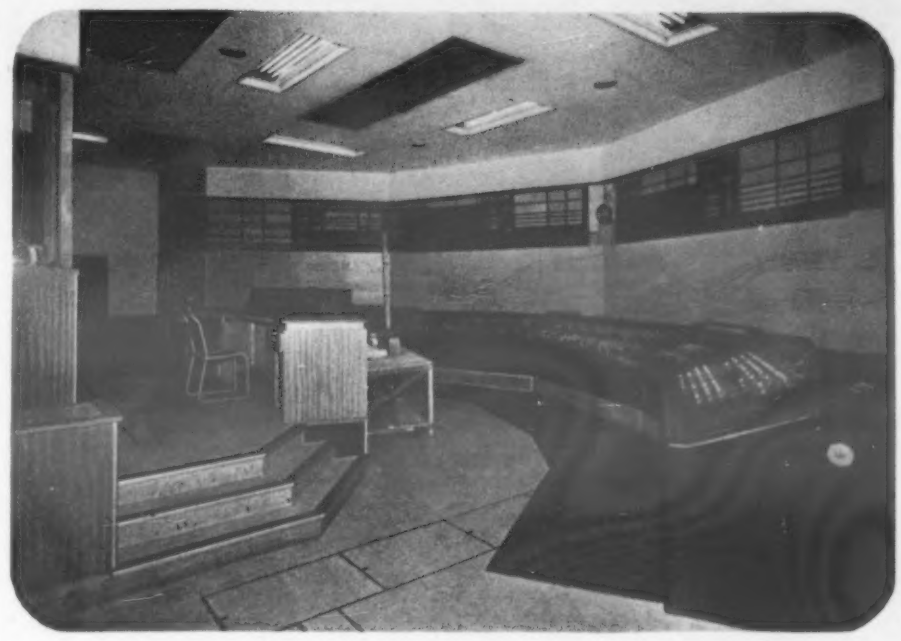
Group taken on the occasion of the recent annual visit of the board of directors of East Yorkshire Motor Services, Limited, to depots and bus stations:
Left to right: Messrs. L. W. Simpson, chief engineer; C. R. H. Wreathall, general manager; G. M. Newberry, traffic manager; Lord Buckhurst, director; C. Rawling, secretary; J. Spencer Wills, chairman; A. F. R. Carling, managing director; H. A. Short, director; W. Holland, Anlaby Road (Hull) depot manager

At the annual general meeting of the Federation of British Industries, Mr. William H. McFadzean was elected president for the coming year. Mr. McFadzean has been chairman and managing director of British Insulated Callender's Cables, Limited, since 1954. Mr. D. L. Walker, C.B.E., general secretary of the F.B.I., retired on April 9 after 42 years in the Federation's service. He has been elected a vice-president and has agreed to accept the appointment of honorary adviser to the Federation. Mr. John Gough, hitherto assistant general secretary, becomes secretary. Mr. Walker has joined the board of Triplex Holdings, Limited.

* * *

Mr. G. E. Staves, principal administrative officer at British Transport Docks headquarters, is retiring on May 11 after over 50 years' service with the Commission and its predecessors. He began his transport career in the service of the former L.N.W.R. and was in charge for a time of the L.M.S.R. docks at Barrow. He was subsequently appointed headquarters assistant, responsible for its dock and canal undertakings. Mr. Staves served on the docks committee of the wartime Railway Executive Committee. In 1948 he joined the Docks and Inland Waterways Executive as assistant secretary for docks and when British Transport Docks was set up as a separate division of the Commission, became principal administrative officer to the management board.

NOW IN SERVICE AT NEWCASTLE



On April 12th British Railways (North Eastern Region) brought into service their latest modern

WESTINGHOUSE

O.C.S. ROUTE RELAY SIGNALLING INSTALLATION

Housed in a new air conditioned signal box, this installation takes over the work previously done by four signal boxes employing a total of 538 levers and 34 switches. The panel incorporates 641 route switches, controls 10 miles of track, and has provision for possible future extension.

There are 94 colour light signals, 61 route indicators, 131 sets of electro-pneumatically operated points, 200 track circuits and 2,850 relays of various types.

The signal equipment was supplied by, and the internal work—wiring, erecting relay racks, etc.—was carried out by

Westinghouse Brake and Signal Co. Ltd., 82 York Way, London, N.1

Saxby & Farmer (India) Private Ltd., Calcutta — McKenzie & Holland (Australia) Pty., Ltd., Melbourne
Agents:—Bellamy & Lambie, Johannesburg — Westinghouse Brake & Signal Co. S.A. (Pty.) Ltd., Johannesburg.

PICKFORDS HEAVY HAULAGE SERVICE
Abnormal Loads • *Lifting*
MOBILE CRANES FOR HIRE • Branches in all large towns

Follsain-Wycliffe FOUNDRIES LTD.

SPECIALIST PRODUCTS IN "CY" REGD.
ABRASION-RESISTING ALLOY

LOCO BRAKE BLOCK LIFE extended from 3 months to 2½ years

This is typical of the extra service being obtained from our CY Alloy Brake Blocks—which although remarkably resistant to wear, have no adverse effect on loco tyres. This is one of our most popular applications. After exhaustive tests many of the best known manufacturers of locomotives fit Cy brake blocks as standard.

FOLLSAIN-WYCLIFFE FOUNDRIES LTD.
LUTTERWORTH • Near RUGBY
Tel.: Lutterworth 10, 60 & 152
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OFFICIAL NOTICE

CORAS IOMPAIR EIREANN

ROAD FREIGHT SERVICES MANAGER

CORAS IOMPAIR EIREANN invite applications for the post of Manager of Road Freight Services.

This Officer will be responsible to the Traffic Manager for the control of:

1. Railhead, Freight and Parcels Services to work in co-ordination with the Board's Railway Services.
2. Direct Road Transport Services for general merchandise, livestock and specialised services including heavy haulage and furniture removals.

Applicants should have experience of modern road transport operating techniques and commercial practices.

The post involves control of about 1,300 traffic staff and 700 vehicles.

Applications should be submitted not later than May 8, 1959, to: Secretary, Coras Iompair Eireann, Kingsbridge Station, Dublin.

Canvassing will disqualify.

Kingsbridge Station, Dublin. M. J. HAYES, Secretary.

[Other Official Notices appear on page 12]

IMPORTANT CONTRACTS

Doncaster Bypass

AWARD of a contract for construction of the 13-mile northern section of the Doncaster Bypass to the civil engineering consortium, Cubitts-Fitzpatrick-Shand, is officially announced. The constituent companies—Holland and Hannen and Cubitts (Great Britain), Limited, Fitzpatrick and Son, Limited, and Lehane, Mackenzie and Shand (Contractors), Limited—are ready to make an early start and will recruit much of the labour required in the area. The Doncaster Bypass, which will be to motorway standards and is due for completion in May, 1961, will eventually be joined by the London—Yorkshire Motorway. Its route and a reference to other improvements to the Great North Road appeared in our issue for April 11.

Decca Wins New York Order

It is reported from America that the British company, Decca Radar, Limited, has won a hotly contested contract worth about £18,750 to supply radar navigational aids for seven New York City ferryboats. The contract provides for 14 Type D 303 radar sets for installation in seven double-ended vessels plying between Brooklyn and Staten Island. This order follows one placed earlier by the New York Fire Department for Decca Type 214 river radar; seven sets of this type have already been supplied. More than 700 of the D7 series radars have now been ordered.

North Eastern Region Contracts

Recent contracts placed by the North Eastern Region of British Railways include:

Drummond-Asquith (Sales), Limited, Birmingham, for axlebox washing machine at Simonside wagon depot.

Conveyancer Fork Trucks, Limited, Warrington, for one fork-lift truck at Darlington stores.

Paterson Hughes Engineering Co., Limited, London, for one electrically operated slat conveyor at Hull English Street goods depot.

H. Morris, Limited, Loughborough, for one 30-cwt. electric overhead travelling crane at Hull English Street goods depot.

Consolidated Pneumatic Tool Co., Limited, London, for nine power vane impact wrenches and other tools.

Wakefield-Dick Industrial Oils, Limited, London, for oil fuelling equipment at Leeds Neville Hill motive power depot and York Clifton sidings.

Southern Region Contracts

Recent contracts placed by the Southern Region of British Railways include the following:

Vulcanite, Limited, London, S.W.8, for waterproofing to bridge decking at St. Leonards West Marina.

Holloway Metal Roofs, Limited, London, N.7, for copper roofing for new telephone exchange at Margate.

Tubewights, Limited, London, S.W.1, for fabricated steelwork for gantries at Victoria carriage cleaning shed.

Dorman Long (Bridge and Engineering), Limited, Luton, for reconstruction of Clyst River Bridge, Topsham.

Quiet May Oil Burners, Limited, London, W.C.1, for conversion of oil fuel installation at St. Leonards West Marina boiler house.

Aubrey Watson, Limited, Henley-on-Thames, for foundations to footbridges at Faversham, Whitstable, Birchington-on-Sea and Westgate-on-Sea, and construction of retaining wall at Sevenoaks.

Argentine Developments

The Argentine authorities are studying an offer by Ganz Argentina S.A. to supply direct from the Ganz factory in Hungary 300 passenger coaches for the Argentine State Railways at a cost of U.S.$23.3 million. Representatives of the American Car and Foundry Division of A.C.F. Industries held discussions with the Interim Secretary for Economic and Social Affairs recently on the manufacture of hopper wagons in Argentina. In November this firm was awarded a contract under tender by Ferrocarriles del Estado for the supply of 321 hopper wagons valued at U.S.$3.6 million, 84 per cent of which was financed out of the Export-Import Bank credit of 1957.

Leyland Group Orders

Large orders recently placed with the Leyland group include one from British Road Services for 175 vehicles, of which 68 will be Leyland Comet tractors for 17½ tons gross combined weight similar to 800 already operated by B.R.S., 58 will be Albion Chieftain chassis and 49 will be Albion Victor chassis with extra long wheelbases. All but 14 of the Chieftains will have the new Albion easy-entry steel cab and double-reduction rear axle. Other orders for the group include one valued at £150,000 from Iran for 33 Leyland lorries, 16 Albion lorries and 16 Albion buses; one from Esso Petroleum Co., Limited, for 24 Leyland Beaver tractors and four Albion Caledonian tanker chassis; one from National Benzole Co., Limited, for five Caledonian chassis and four Albion Chieftain lorries; and one from the Cleveland Petroleum Co., Limited, for three Leyland Beaver tractors.

Automatic-Feed Press for Ford

In a new production line recently put into operation by the Ford Motor Co., Limited, flat steel bars 45 to 60 ft. long are transferred by crane direct from the rolling mill in stacks 20 in. high and automatically loaded one by one into a 250-ton punching and cropping press. The press, supplied by Cowlishaw, Walker and Co., Limited, Biddulph, is provided with adjustable tools for cutting and punching slightly different sections of bar to produce lengths adjustable between 5 in. and 5 ft. The tools have twin tracks so that two stacks of bars may be fed together. The loading and automatic feeding mechanism was designed and manufactured by the Hymatic Engineering Co., Limited, Redditch, and the electrical control equipment was evolved jointly by Hymatic and Cowlishaw, Walker and manufactured by Square D, Limited.

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TENDERS INVITED

THE following items are extracted from the Board of Trade Special Register Service of Information. Inquiries should be addressed, quoting reference number where given, to the Export Services Branch, Board of Trade, Lacon House, Theobalds Road, London, W.C.1.

May 1—Australia.—Transport Department, Tasmania, for three sets of equipment for diesel locomotives consisting of ENGINE, TRANSMISSION and CONTROLS. Copies of the tender documents from the Agent-General for Tasmania, 457 Strand, London, W.C.2.

May 1—Union of South Africa.—South African Railways for one battery-operated FORK-LIFT TRUCK complete with battery and charger. Tenders, endorsed "Tender No. F.7758: Fork-Lift Truck" to the Chairman of the Tender Board, P.O. Box 7784, Johannesburg. (ESB/8615/59.)

May 7—Canada.—Manitoba Hydro-Electric Board for the design, fabrication, delivery and erection of a MONORAIL HOIST for the Kelsey Generating Station. Tender documents available on loan from Export Services Branch, B.o.T. (ESB/8917/59.)

May 7—Ethiopia.—Imperial Highway Authority for 62 3-cu. yd. DUMP TRUCKS with gross weight rating of not less than 19,500 lb. and four PICK-UP TRUCKS of 6,700 lb. g.v.w. Tenders to the Imperial Highway Authority, P.O. Box 1770, Addis Ababa, Ethiopia. (ESB/8571/59.)

May 7—Korea.—International Co-operation Administration for 100,000 hardwood SLEEPERS, 7 in. by 9 in. by 8 ft. Tenders to the Office of Supply, Government of the Republic of Korea, Seoul, Korea. (ESB/8766/59/ICA.)

May 11—Portuguese East Africa.—Ports, Railways and Transport Department for a remote-control SIGNALLING INSTALLATION. Drawings and specifications from the Railway Warehouse, Lourenço Marques, through local agent.

SHIPPING and SHIPBUILDING

Seaway Opening Date

THE £160 million St. Lawrence Seaway linking the heart of America with the Atlantic should be open for navigation today (April 25). The announcement was made following completion of an aerial survey indicating that ice should have cleared the Montreal end of the seaway by April 25. However, there are reports that ice this year has been more persistent than in any of the past 40 years. The ceremonial opening has been fixed for June 26, to be performed in the presence of H.M. the Queen and President Eisenhower.

Belfast Claim for New Cunarders

IN the Ulster House of Commons, Lord Glentoran, Northern Ireland Minister of Commerce, gave an assurance that the Government would be prepared to consider financial assistance to Harland and Wolff, Limited, in Belfast, if it would help to win the contract for one of the proposed new Cunard liners. He had been given an assurance that the claims of Northern Ireland to undertake the work would be carefully considered in conjunction with the claims of the Clyde and other areas.

Large Tanker from Belfast

JUST completed by Harland and Wolff, Limited, at Belfast is the 42,000-ton deadweight oil tanker *British Statesman* for the B.P. Tanker Co., Limited. Harland and Wolff has a similar vessel under construction for the same owners, while two smaller oil tankers are also in the early stages of construction, one at Belfast and the other at the company's Govan shipyard, Glasgow. The hull of the 42,000-tonner is divided by longitudinal and transverse bulkheads into 44 oil-carrying compartments, and is framed longitudinally throughout the cargo spaces and pumproom and transversly at the forward and after ends. The accommodation throughout the vessel is air conditioned to suit the special service conditions of the vessel. The life-saving appliances include four plastics lifeboats.

New Turbine Tanker

FIRST oil tanker to be built for the British India Steam Navigation Co., Limited, the 19,045-ton *Queda*, has completed her trials on the Clyde and has been handed over by her builder, Scotts' Shipbuilding and Engineering Co., Limited. Her main hull is divided into 27 cargo tanks and two main pump rooms by corrugated bulkheads, while a small hold situated over the forward oil fuel deep tanks is available for carrying cased cargo. The vessel is generally of all-welded construction. Special features of the accommodation, amidships for officers and aft for petty officers and crew, include air-conditioning of officers' cabins and public rooms, a permanent swimming pool and cinema for their leisure hours. Glass fibre permanent awnings are fitted over exposed decks in the way of accommodation spaces.

Launching of m.v. "Selby"

THE fifth of six new Clyde-built ships which are to complete the modernisation of the B.T.C.-associated Associated Humber Lines fleet was launched on Tuesday this week. Built at the yard of James Lamont and Co., Limited, Greenock, the new vessel was launched and named *Selby* by Mrs. Wansbrough-Jones, wife of Major-General Ll. Wansbrough-Jones, C.B., C.B.E., secretary-general of the British Transport Commission. A sister ship to both the m.v. *Harrogate* and m.v. *Darlington*, she is of approximately 1,100 tons total deadweight, giving 950 tons cargo deadweight. The new vessel will trade in the Associated Humber Lines Goole and Hull services to the near Continental ports, and will embody up-to-date cargo facilities. The propelling machinery is situated at the after end of the vessel and the single-screw diesel engine is the Ruston and Hornsby 7 V.O.X.M. The vessel is expected to be in service about mid-summer.

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FINANCIAL RESULTS

NOTES on the trading results, dividends and financial provisions of companies associated with the transport industry are contained in this feature, together with details of share issues, acquisitions and company formations or reorganisations.

Harland and Wolff

Group net profits of Harland and Wolff, Limited, for 1958 were £701,677 (£235,388), but the ordinary dividend is again 10 per cent. Group profits attributable to members of the holding company amounted to £692,431 (£463,944). To capital expenditure replacement account is placed £130,000 (£100,000). General reserve receives £150,000 (nil).

British Motor Corporation

A second interim dividend of 7½ per cent is being paid by the British Motor Corporation, Limited, in respect of the financial year ending July 31, 1959. It is proposed to issue 38,207,652 ordinary shares of 5s. each, fully paid, by the capitalisation of reserves, to ordinary shareholders in the proportion of three new ordinary for every 10 ordinary held. The new ordinary shares will not rank for the second interim dividend.

British Aluminium

Group accounts for the year ended December 31 of the British Aluminium Co., Limited, now a subsidiary of Tube Investments, Limited, show manufacturing and trading profits, less losses, of £2,105,394 (£3,020,706), after depreciation of £844,848 (£810,165) and £120,000 (£200,000) transferred to plant replacements reserve. Net profit £1,030,242 (£1,247,389) after tax £1,180,024 (£1,617,345). Credit is taken for tax provisions in previous years no longer required of £44,836 (£651,720).

Chloride Electrical Storage

The directors of the Chloride Electrical Storage Co., Limited, report a surplus for 1958 of £899,009 (£756,231), after deduction of U.K. taxation £799,754 (£1,005,474) and other taxation £338,319 (£236,582). Balance available £1,030,899 (£825,719). In addition to the interim of 5 per cent last October on the "A" and "B" ordinary stock a further interim dividend of 12½ per cent is to be distributed on the stock for the year 1958. No further dividend for 1958 will be recommended but an interim dividend of 2½ per cent is to be distributed for 1959. At an extraordinary general meeting immediately following the annual meeting on June 3 it will be proposed to increase the authorised capital of the company to £7,500,000 and by capitalisation of reserves to issue 1,562,200 "A" ordinary shares and 595,206 "B" ordinary shares fully paid to existing holders in the proportion of one new "A" and one new "B" for every £2 units of "A" and "B" ordinary stock.

Clayton Dewandre

Mr. A. V. Perry, chairman of the Clayton Dewandre Co., Limited, in his annual statement to shareholders, has expressed confidence that removal of the 30 per cent purchase tax on commercial vehicle chassis would lead to a rapid demand for heavy duty vehicles. He adds: "If the nervousness about renationalisation could be dissipated, the effect would be even more stimulating." Recalling that last year he forecast that 1958 would not be an easy one for the industry generally, and that Clayton Dewandre could not hope to remain immune from the general trend, Mr. Perry says: "Unfortunately, my foreboding has been justified. In the light and medium engineering industry at the moment there has been, if anything, a deterioration in the position since the middle of last year. Order books have been shortened, stocks are being run down, and the demand for labour has diminished. Our business overseas has maintained itself reasonably well, but there is a tendency throughout the world to indigenous manufacture, which is engaging our attention." Net profit was £151,068 (£206,545) and dividend is 20 per cent.

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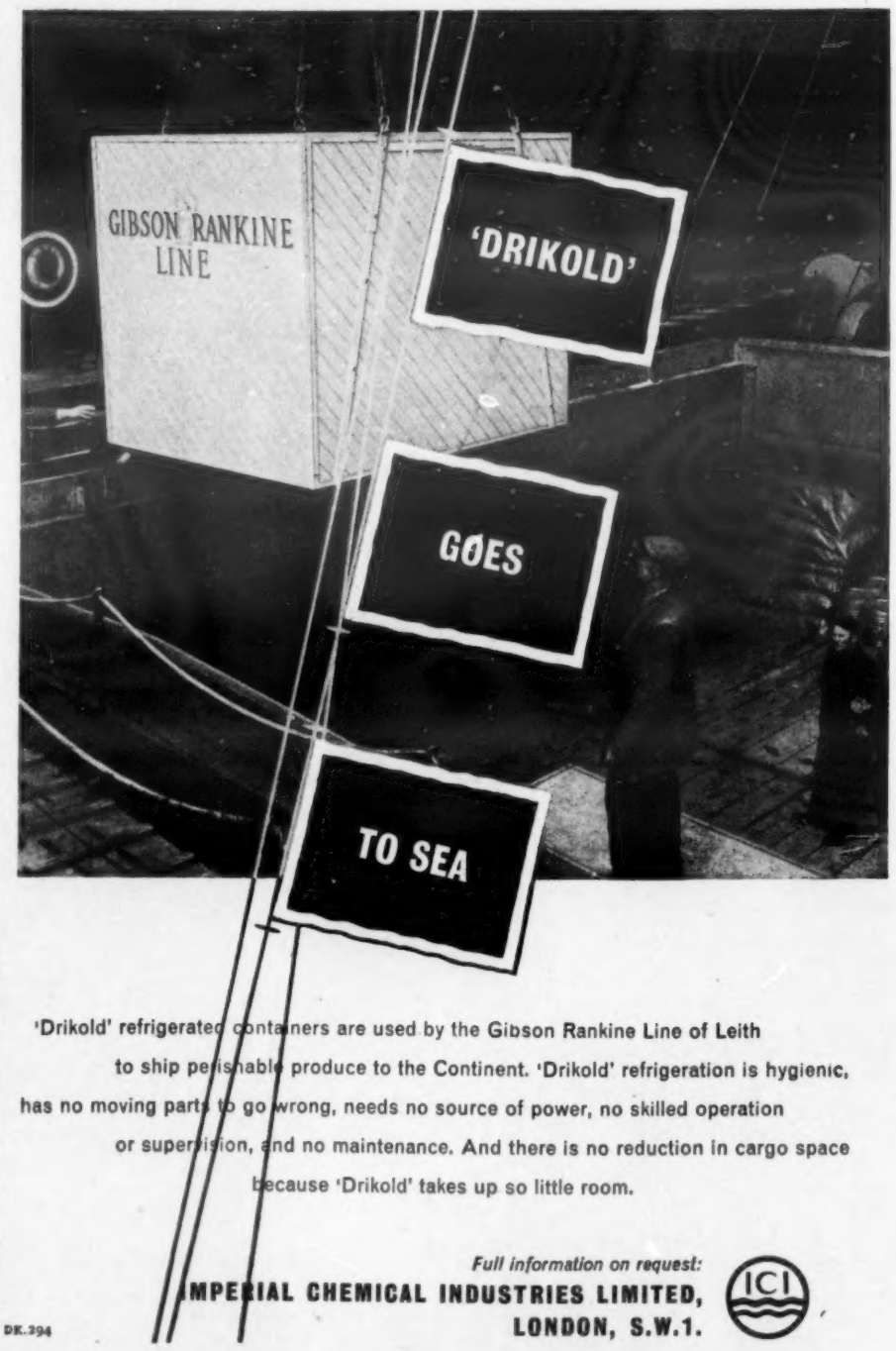

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